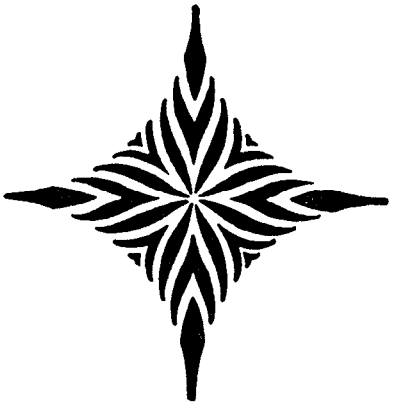
SURVEY OF INDIAN HEALTH SERVICE PHYSICIANS TO STUDY ISSUES RELATED TO RECRUITMENT AND RETENTION

SURVEY REPORT



DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE • INDIAN HEALTH SERVICE

NACI

SURVEY OF INDIAN HEALTH SERVICE PHYSICIANS TO STUDY ISSUES RELATED TO RECRUITMENT AND RETENTION

SURVEY REPORT

Prepared under
Contract Number 282-91-0056
Delivery Order Number 1

Issued by

Department of Health and Human Services
Public Health Service
Division of Acquisition Management, ASC/OM
General Acquisitions Branch
Parklawn Building, Room 5-101
5600 Fishers Lane
Rockville, Maryland 20857

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April 30, 1992

NACI

NACI and Abt Associates Inc. worked as a team to conduct this study. Primary responsibility for data collection and validation was at NACI, while Abt staff took the lead in the data analysis. Key personnel at NACI were Project Manager James L Millette, Erin Downing and Colette Semkow. The work at Abt involved William D. Marder, PhD, Eleni Spheeris, and W. David Warner.

NACI and Abt Associates Inc. would like to thank the OPEL staff at IHS under the leadership of Leo J. Nolan for their assistance and guidance in conducting this study.

TABLE OF CONTENTS

EXECUTIVE SUMMARY
Survey of Physicians Employed by the Indian Health Service

Between October 1991 and January 1992, Native American Consultants, Inc. (NACI) implemented a survey of full-time, permanently employed Indian Health Service (IHS) physicians. Surveys were mailed to 1,014 physicians identified on payroll records from the IHS. Each questionnaire was mailed along with a letter from Everett R. Rhoades, MD, explaining the goals of the survey and requesting cooperation. The survey focused on four major categories of questions: 'personal experiences and medical practice in the IHS, as well as future career plans; individual assessments of particular features of the IHS and the importance of these features in a physician's decision to stay with or leave the IHS; demographic information; and recommendations of changes in the IHS which might extend tenure with the service. In addition to collecting information on current IHS physicians through the surveys, NACI obtained some IHS administrative data containing physician addresses, telephone numbers, job titles, salaries, and other administrative information. All data were obtained with assurances that individual respondents' identities would not be revealed.

Physicians who did not respond to the initial mailing were contacted by telephone and urged to respond. By the closing date for the survey, NACI had received 649 completed surveys from the 853 eligible physicians--yielding a final response rate of approximately 76 percent. Survey respondents were compared to non-respondents in three categories -- type of employee (Civil Service or Commissioned Corps), IHS region, and job title -- to examine whether different response rates could bias findings based only on survey respondents. These comparisons were based on data included in IHS records for both respondents and non-respondents. Only one of the comparisons identified statistically significant differences between respondents and non-respondents. Physicians who were medical directors or chiefs were somewhat more likely to respond than others.

The final survey response rate of 76 percent was lower than the response rates reported in both the 1980 and 1982 IHS survey efforts. However, the goal of the 1991 study was not only to achieve a high response rate in terms of the number of surveys returned, but more importantly, to achieve a high response rate in terms of the number of questions answered per respondent. That is, high item response rates were an important goal. Among all survey respondents, a very high mean item response rate of approximately 97 percent was achieved. Thus, the completed questionnaires contained answers to virtually all of the questions. The earlier survey efforts had much larger item non-response rates.

OVERVIEW OF THE SURVEY RESULTS ON SATISFACTION

Table 1 displays the 17 aspects of the II-IS about which respondents were asked to rate, using two different measures: how satisfied respondents were with each dimension; and how important each dimension was in the decision to stay with or leave the MS. Respondents rated their satisfaction level on a five point integer scale that was recoded to range from -2 for very dissatisfied to +2 for very satisfied. Importance was measured on a five point scale that was recoded to range from 0 for not important to 4 for very important. Table 1 also displays a third measure of each dimension which was constructed by multiplying the individual satisfaction and importance scores. This composite rating ranges from -8 to +8.

Aspects of II-IS employment that received the highest mean importance scores include quality of care, impact of the job on family life, levels and quality of administrative support, relationships with the Native American community, and local living conditions. Housing benefits, the loan repayment program, and IHS physical facilities received the lowest mean importance scores. The precise meaning of these aspects of employment was defined by the language of the questionnaire, which was brief and fairly general.

Considering both levels of satisfaction and importance, Table 1 indicates the following areas in which the IHS received positive mean composite responses:

- Quality of care provided;
- Relations with the Native American community; and
- Local living conditions.

The following areas earned negative mean ratings:

- Number of medical support staff;
- Finances, especially future IHS compensation; and
- Career development opportunities.

Administrative support staff also received a low mean composite rating.

TABLE 1

Average Satisfaction and Importance Scores By Dimension

Dimension		Mean Satisfaction Score -2 to +2*	Mean Importance Score 0 to 4*	Mean Composite Rating -8 to +8*
Quality/Adequacy of Care	Quality of Care	**1.09**	3.17	3.54
	Referral Services	0.42	**2.49**	1.03
Quality/Adequacy of Staff/Facilities	Administrative Support	**0.00**	**2.93**	-0.17
	Number of Medical support staff	-0.71	2.77	-2.17
	Quality of Medical support staff	**0.55**	2.91	1.59
	IHS Physical Facilities	**-0.08**	**2.33**	**-0.28**
	Patient Care Hours	0.78	2.60	1.94
Education/Career Opportunities	CME Opportunities	0.25	2.41	0.65
	Career Develop Opportunities	-0.15	2.48	-0.46
Finances	Annual IHS Compensation	**0.05**	2.58	-0.41
	Future IHS Compensation	**-0.04**	2.68	-0.57
	Loan Repayment Program	-0.09	2.11	**-0.36**
Living Conditions	Native American Relations	**0.99**	2.84	3.03
	Housing Benefits	-0.11	1.94	-0.06
	Local Living Conditions	0.86	2.76	2.47
Family Impact	Family Impact	**0.40**	**2.96**	1.26
	Spousal Job Opportunities	**0.40**	2.55	1.35

*Indicates the potential range for each measure.

Seventeen different ratings are quite difficult to analyze as a group, particularly because the individual ratings are not independent. A physician who is generally happy with his or her employment situation may well provide similar positive ratings on multiple dimensions. To summarize the overall level of a respondent's satisfaction with the IHS, we developed an Index of Satisfaction. The index was constructed by weighting the respondent's composite rating for each of the seventeen dimensions by the average importance attached to each dimension by the entire respondent group. We then rescaled that weighted average so that the highest possible satisfaction level -- for an individual who rated the IHS with a +8 on each dimension -- would receive an overall Index of Satisfaction equal to 100. This technique also provides a lower bound of -100 for an individual who offered a -8 rating on each dimension. An index value of 0 indicates that on balance the physician is neither satisfied nor dissatisfied with employment in the IHS.

In fact, the Index of Satisfaction ranged between -64 and +80, with a mean value of 9.62. According to this measure, the majority of respondents were mildly satisfied with employment in the IHS. Approximately 25 percent had index values below -4.0, and another 25 percent had values greater than 24.6. Without a reference group of physicians it is not possible to judge whether these satisfaction measures are high or low. However, past retention statistics certainly suggest that the lower scores represent significant dissatisfaction.

Another measure of general satisfaction can be compared to physicians outside the IHS. When asked whether they would enter the medical profession again -- knowing what they know now -- IHS physicians offered more positive responses than non-federal patient care physicians surveyed in 1987 by the American Medical Association. Among all surveyed IHS physicians, slightly less than 10 percent indicated that they would not choose medicine as a profession again, compared to almost 40 percent of younger physicians and 33 percent of older physicians.

According to the IHS survey data on overall satisfaction, primary care physicians are generally more satisfied than those in non-primary care. However, board certification was associated with lower average satisfaction levels. International medical graduates (IMGs) are more satisfied than U.S. medical school graduates, with graduates of osteopathic schools reporting even lower levels of satisfaction. Among IHS regions with substantial numbers of physicians, Albuquerque and Portland were assigned satisfaction indexes of more than one-and-one-half times the overall respondent average value. On the other hand, physicians in the Navajo and Phoenix IHS region are generally less satisfied. Not surprising was the finding that more experienced and higher ranking physicians have higher satisfaction levels.

Finally, a number of personal characteristics were examined that were uncorrelated with satisfaction: gender, race or ethnicity, and marital status.

The survey also focused on whether respondents would choose to practice medicine in the IHS again, given their experiences in the service. The majority of physicians -- approximately 79 percent -- responded that they would choose to practice in the MS again. Predictably, overall satisfaction was greater for this group of respondents than for those who reported that they would not serve in IHS again.

ANALYSIS OF RETENTION

The issue of retention was analyzed using a question about the respondent's plans to leave the IHS within the next five years. Approximately 56 percent of both primary care and non-primary care physicians plan to leave the IHS within one and five years; and approximately 63 and 51 percent of Civil Service employees and Commissioned Corps Officers, respectively, plan to leave during this period. The majority of physicians in Navajo and Phoenix regions -- the two most populated'regions -- plan to leave the IHS within one and five years. On the other hand, the majority of survey respondents **in** the Oklahoma and Alaska regions -- the third and fourth most populated regions, respectively -- do not plan to leave within the next five years.

No readily available data exist about the **planned** tenure of physicians outside the IHS. The closest comparison that can be made is to geographic mobility among post-residency physicians in active practice. Among this group of physicians, approximately 5 percent move from one county to another each year; a much smaller percentage retire. Consequently, the **planned** exits from the IHS appear to be greater than would be expected from the general physician population.

Satisfaction and plans to leave the IHS are related. Analysis of the survey dam undertaken by Abt Associates and NACI explored policy options that can best affect the willingness of physicians to extend their stays. **The** survey responses were used in a multiple regression model of individual plans to leave the IHS. Time until resignation was estimated controlling for personal and professional characteristics of respondents, as well as their ratings of the dimensions reported in Table 1. Table 2 summarizes the results of that analysis. Plus signs by a particular dimension indicate that higher rankings increase expected tenure in the IHS holding constant specialty, job title, location, and other characteristics. Only statistically significant effects are shown in the table.

TABLE 2

Impact of Satisfaction and Importance on Planned Tenure

	Dimension	Satisfaction Score	Importance Score	Composite Rating
Quality/Adequacy of Care	Quality of Care		+	ns
	Referral Services	ns	ns	ns
Quality/Adequacy of Staff/Facilities	Administrative Support	+		+
	Number of Medical support staff	ns		ns
	Quality of Medical support staff	ns	ns	ns
	IHS Physical Facilities	ns	ns	ns
	Patient Care Hours	ns	+	ns
Education/Career Opportunities	CME Opportunities	ns	ns	+
	Career Develop Opportunities	ns	ns	ns
Finances	Annual IHS Compensation	ns	ns	ns
	Future IHS Compensation	+*	ns	+
	Loan Repayment Program	ns	ns	ns
Living Conditions	Native American Relations	ns	ns	+
	Housing Benefits	ns	ns	ns
	Local Living Conditions	ns	+*	+*
Family Impact	Family Impact	ns	ns	ns
	Spousal Job Opportunities	ns	ns	ns

Note: **Entries in this table indicate the statistical significance and direction of the effect of increasing satisfaction, importance, or the rating index on plans to leave the IHS.**

'Statistical significance depended on model specification.

The issue of retention was further analyzed using comments provided by physicians in response to the open-ended question included on the survey. Physicians who responded to this question were, on average, less satisfied and likely to leave the IHS sooner. Their concerns focused on salary and support levels to a greater degree than the average respondent. In addition, these respondents identified important issues that may be relevant to only a few physicians.

POLICY RECOMMENDATIONS

The findings reported in Table 2 lead directly to our policy recommendations. The results for satisfaction levels (satisfaction score column) generate recommendations for retention policies. The importance results (importance score column) lead to the recruitment recommendations. To be especially conservative, recommendations were developed only for those findings that were statistically significant both for the satisfaction or importance scale and the composite ratings index. These were the most robust statistical results.

According to our findings, the IHS could retain a larger group of physicians by:

- Improving administrative support; and
- Changing physician expectations about future IHS compensation.

Although other factors may influence plans to leave the IHS these two showed consistently positive effects on tenure. It is important to note that annual salary levels do not have significant effects on retention. However, expectations about future compensation do. Offering greater returns to experience in the IHS may change these expectations and improve retention rates. Table 2 also indicates that physicians expressing greater satisfaction with the quality of care provided are likely to leave the IHS sooner. This counterintuitive finding is offset by the impact of the importance placed on quality of care in the decision to remain. We conclude that whatever benefits there may be to improving the quality of care, it is unlikely to change IHS retention of physicians.

Analysis of planned tenure yielded another consistent finding not shown in Table 2. Longer service obligations will extend planned tenure. In fact, some physicians stay in the IHS beyond the end of their obligation. An effective strategy to prolonging tenure in the IHS may be to offer an additional educational subsidy plan in return for a longer term of obligated service.

Offsetting the above finding is the lower reported overall satisfaction of physicians who have a current service obligation. The negative impact of dissatisfied physicians on their co-workers may offset the benefits of lower turnover.

Recruitment strategies can also be based on those personal characteristics that are associated with longer tenure in the IHS. Controlling for other factors, Native American physicians planned to leave the IHS 6 months later than comparable non-Indian physicians, but the difference was not statistically significant. Similarly, we found no statistically significant results by gender. The presence of pre-school-age children led to decisions to leave the IHS sooner, but school-age children were associated with longer tenure. Type of medical school and activity prior to joining the II-IS were not consistent predictors of longer tenure. However, physicians with post-residency clinical experience prior to joining the IHS may plan to stay for longer periods, holding constant other characteristics. Thus, recruitment strategies targeted to older physicians should be considered.

Characteristics of the current job can certainly affect plans to leave. Medical Officers are predicted to leave the IHS 8 to 9 months sooner than Clinical Specialists and over 3 months sooner than physicians whose titles include the term Director or Chief. Three IHS regions -- Albuquerque, Portland, and Oklahoma -- had higher potential retention rates than the others, controlling for other job characteristics.

Retention can be enhanced by selecting physicians whose personal values are associated with longer tenures. Table 2 indicates that the IHS should positively recruit physicians who will appreciate the kind of local living conditions that are available. The study suggests that recruiters should also focus on those who are committed to serving Native American communities, but the evidence here is not as strong. These findings reinforce the conventional wisdom. Finally, recruitment materials should indicate that there are limited administrative support resources available in some II-IS facilities and that physicians who require a lot of support have, in the past, planned to leave the IHS because of these limitations.

Findings from this study can be compared to those from the 1980 and 1982 surveys. Some common themes can be noted, especially the importance of administrative support in physicians' decisions to leave the IHS. Changing the support levels may be more costly than the physician turnover that better support would ameliorate. In the context of the present study, however, conducting a cost-benefit analysis of this or other retention strategies was not possible. Providing that analysis would require collecting additional information on the resource costs of changing the system, as well as estimating the cost associated with physician turnover. Given the persistence of the administrative support problem, a full cost-benefit study of this issue may be warranted.

Compared to the surveys conducted in the early 1980s, the 1991 Survey of II-IS Physicians found that career development and future compensation -- rather than current salary -- were key retention issues. Planning to address these issues can be challenging. Providing employees with career development

opportunities and income growth, even when they choose to avoid managerial responsibility, is a challenge for many organizations that employ physicians. In this respect, the IHS is no exception.

The recommendations discussed above are supported by considerable statistical evidence. Presented below are additional recommendations based either on less robust quantitative findings or on qualitative results from responses to the open-ended question.

- Periodic surveys of IHS physicians indicate a willingness to consider the ideas of those in the field, and that willingness is valued.
- The important role of physicians providing patient care under contract to the IHS was beyond the scope of this project. They should be surveyed, particularly in those areas where contract care is the predominant delivery system for the MS.
- The survey results indicate that continuing medical education opportunities can influence tenure and may be a relatively inexpensive policy option for the IHS.
- Recruiting physicians with some post-residency experience outside the IHS may be an effective strategy for lengthening tenure.
- Training programs should familiarize new physicians with the administrative procedures used by the IHS and emphasize that all systems, including those in the private sector, have similar administrative issues.

These final recommendations may not have the same statistical support as those presented earlier, but the evidence is suggestive. Further, these ideas were presented by respondents to the open-ended question. Therefore, the emotional presentation of their concerns warrants special attention.

The experience gained from surveying physicians can and should be extended to other health professionals. Recruitment and retention of nurses and dentists may not be affected by the same issues identified in the survey of physicians. However, adapting the methodology employed in this study to the other professions can provide important information to IHS managers and can -- simply through implementation -- raise overall satisfaction levels for these professionals.

Survey of Physicians Employed
by the
Indian Health Service

I. INTRODUCTION

This report presents the results from the first comprehensive survey of Indian Health Service (IHS) physicians since 1982. The survey was designed by Abt Associates Inc. during the winter of 1990 and implemented by Native American Consultants Inc. (NACI) between October 1991 and January 1992. The purpose of this effort was to identify strategies that could help the Indian Health Service (IHS) reduce the very high turnover rate among its physician employees. The survey questionnaire included items about individual respondent's plans to leave the IHS. The questionnaire also queried physicians about their opinions on different aspects of their work and the importance of these features in their decision to continue employment with the IHS.

Strategies to reduce physician turnover in the IHS fall into two major areas: either recruit individuals who are more likely to stay, or change the nature of the job in ways that make retention easier. The survey was designed to help identify physicians who would be good candidates for recruiters. Analysis of the survey data would identify characteristics of employment that, if changed, would improve physician retention.

An obvious example of the first strategy would be to recruit physicians who were Native Americans. IHS experience has been that Native American physicians are much more likely to serve in their own communities through long tenure. Unfortunately, there are relatively few Native Americans with medical degrees. Table 1.1 shows the small numbers of Native Americans entering U.S. medical schools during the past 20 years. The number of applicants is less than 150 per year -- representing less than one half of one percent of all applicants. The acceptance ratio -- the percentage of all applicants who were offered admission to a U.S. medical school -- is slightly below the general trend of 1.5 applicants for each opening in a school. Table 1.1 also shows the total number of Native Americans graduating from U.S. medical schools during the past 20 years. According to these data, approximately 50 Native Americans graduate from U.S. medical schools each year. This pool of graduates is not a large number from which to recruit. We note, however, that the 1991 survey of II-IS physicians identified only 43 respondents who were Native Americans. Assuming that physicians have a "work life" of 40 years after completing residency training, we estimate that the IHS employs approximately 1/40th (3 percent) of all Native American physicians. Increasing this percentage -- even slightly -- may not be possible. Thus,

the analysis presented in this report identifies other classes of individuals who are more likely to stay in the IHS.

TABLE 1.1

Application Rates, Acceptance Rates, and Graduate Totals of Native American Applicants in U.S. Medical Schools

Academic Year	Number of Applicants	Percent of All Applicants	Number Accepted	Percent of Applicants Accepted	Number of American Indian Graduates	Percent of Total U.S. Graduates
1970-71	--	--	--	--	--	--
1980-81	147	0.4	62	42.2	43	0.2
1985-86	125	0.4	55	44.0	49	0.3
1986-87	121	0.4	60	49.6	63	0.4
1987-88	123	0.4	64	52.0	58	0.4
1988-89	114	0.4	70	61.4	57	0.4
1989-90	136	0.5	84	61.8	52	0.3
1990-91	132	0.5	70	53.0	--	--

Note: The Association of American Medical Colleges (AAMC) reports data on American Indians, which we have redefined as Native Americans.

Source: Association of American Medical Colleges. Table B2 and Table B4, in AAMC Data Book Statistical Information Related to Medical Education, January 1991.

Results from the 1980 and 1982 surveys of IHS physicians indicated significant problems with compensation, security, and bureaucracy. The implication of these earlier studies was that improvements in these areas would enhance IHS retention. The 1991 study reviews the same issues and provides a set of relevant recruitment and retention strategies.

The discussion of survey results is structured as follows:

- Chapter 2 focuses on survey methods in terms of the actual survey implementation process; comparisons of survey respondents to non-respondents; comparison

of the survey response rate to that achieved in the 1982 IHS survey effort; and analyses of respondent characteristics.

- Chapter 3 presents an overview of the survey results on physician satisfaction. Key areas of discussion are satisfaction and importance scores for each of the 17 IHS dimensions ranked by respondents; construction of an overall rating that summarizes the satisfaction and importance rankings into a single number; analysis of the 17 IHS dimensions by category and overall rating; construction of an overall satisfaction measure and analysis of this measure by respondent characteristics; and comparisons of the overall satisfaction measure with responses to survey questions 11 and 12.

- Chapter 4 focuses on physician satisfaction and willingness to extend stays in the IHS for two groups of physicians: Planners -- those who plan to leave the IHS within the next five years; and Obligated Physicians -- those who have current service obligations, as well as those who have expired obligations and are continuing employment in the IHS. These two group are compared both in terms of their overall satisfaction and their rating of the 17 IHS dimensions. In addition, Chapter 4 presents a summary of the responses to the open-ended question, a discussion of the multivariate analysis of planned tenure, and a summary of the multivariate findings.

- Chapter 5 focuses on policy implications of the survey data in the context of physician retention and recruitment strategies.

In addition, the report includes two appendices: Appendix I contains the survey instrument, letter from Everett R. Rhoades; and Appendix II contains the frequencies of survey responses. For the convenience of the reader, tables and charts are presented at the end of the section in which they are discussed.

II. SURVEY METHODS

2.1 Introduction

Between October 1991 and January 1992, Native American Consultants, Inc. (NACI) implemented a survey of full-time, permanently employed Indian Health Service (IHS) physicians. Surveys were mailed to 1,014 physicians identified on payroll records from the IHS. Each questionnaire was accompanied by a letter from Everett R. Rhoades, MD, explaining the goals of the survey and requesting cooperation. A copy of both the questionnaire and letter appears in Appendix I. The survey focused on four major categories of questions: personal experiences and medical practice in the IHS, as well as future career plans; individual assessments of particular features of the IHS and the importance of these features in a physician's decision to stay with or leave the IHS; demographic information; and recommendations of changes in the IHS to extend physician tenure. In addition to collecting information on current IHS physicians through the surveys, NACI obtained some IHS administrative data containing physician addresses, telephone numbers, job titles, salaries, and other administrative information. All data were obtained with assurances that individual respondents' identities would not be revealed.

During the first week of December, NACI project staff telephoned 390 physicians in a first attempt to encourage survey participation from non-respondents. Through these telephone calls, NACI learned that the payroll records did not differentiate temporary IHS employees from permanent employees. In the following weeks, NACI significantly refined the survey pool of eligible physicians by removing all temporary employees. The total number of eligible physicians was reduced from 1,014 to 853.

By the end of December, 603 physicians had returned a completed survey. During the second week of January, NACI staff conducted another round of follow-up telephone calls to the remaining 250 non-respondents. On January 17, the closing date for the survey, NACI had received 649 completed surveys -- yielding a final response rate of approximately 76 percent.

2.2 Non-Response Analysis

Table 2.1 compares the number of survey respondents to non-respondents by three categories -- type of employee, IHS region, and job title -- to examine whether statistically significant differences exist between the two groups of respondents. These comparisons were based on data included in IHS records for both respondents and non-respondents. To test for statistical significance, we computed chi-square statistics.

Physicians in the IHS can be either Civil Service employees or commissioned officers in the Public Health Service Corps. No statistically significant differences exist between respondents and non-respondents by type of employee. Among Civil Service employees, approximately 75 percent responded to the survey; and among commissioned officers, approximately 77 percent responded.

Twelve IHS regions are specified in this table: Headquarters, Aberdeen, Alaska, Albuquerque, Bemidji, Billings, California, Nashville, Navajo, Oklahoma, Phoenix, and Portland. There are no statistically significant differences between respondents and non-respondents by region.

Four groups of job titles are defined in this table: Director or Chief, Medical Officer, Clinical Specialty, and Other. For the purposes of our analysis, all physician job titles with the words director or chief, medical officer, and clinical specialty were grouped into three separate categories. All other job titles were grouped into the "Other" category. Due to the higher response rate among physicians with managerial responsibilities, we found statistically significant differences between respondents and non-respondents.' Specifically, among medical directors and chiefs, approximately 85 percent responded to the survey. This rate was significantly higher than those reported for other groups of job titles. We considered and rejected the option of weighting the data for non-response. The differences among the groups were relatively small. In our multivariate analysis, we can effectively control for this differential.

'We computed a chi-square value of 8.011 with 3 degrees of freedom. The p-value was approximately 0.046.

Table 2.1: Non-response Analysis

	Responded to Survey?				
	No		Yes		
	N	row %	N	row %	Total
All Physicians	204	23.921	649	76.081	853
Type of Employee					
Missing	3	100.00	.	.	3
Civil Service	100	25.00	300	75.001	400
Commissioned Corps	101	22.441	349	77.561	450
IHS Region					
Missing	6	12.771	41	87.231	471
Headquarters	12	21.821	431	78.181	551
Aberdean	15	22.731	51	77.271	66
Alaska	281	28.571	701	71.431	981
Albuquerque	8	15.091	45	84.911	531
Bemidji	4	16.671	20	83.331	241
Billings	8	15.38	441	84.621	521
California	2	20.001	8	80.001	10
Nashville	3	37.50	5	62.501	a
Navajo	531	27.751	138	72.251	191
Oklahoma	291	28.161	741	71.841	103
[Phoenix	28	24.141	88	75.861	116
Portland	8	26.671	22	73.331	30
Job Title					
Missing	8	16.331	41	83.671	49
Director/Chief	16	14.951	91	85.051	107
Medical Officer	128	27.411	339	72.591	467
Clinical Splty	39	22.031	138	77.971	177
Other	13	24.53	40	75.47	53

2.3 Item Response Rates

As noted above in Section 2.1, implementation of the survey resulted in a final response rate of approximately 76 percent -- a lower rate than those reported in the 1980 and 1982 IHS survey efforts. However, the goal of the study was not only to achieve a high response rate in terms of the number of surveys returned, but more importantly, to achieve a high response rate in terms of the number of questions answered per respondent -- in other words, the item response. Table 2.2 reports mean response rates of questions answered by all survey respondents, as well as by the three categories defined above -- type of employee, IHS region, and job title.

Among all survey respondents, a very high mean item response rate of approximately 97 percent was achieved. Thus, the completed questionnaires contained answers to virtually all of the questions. The earlier survey efforts had much larger non-response rates. Therefore, the strategy of a shorter questionnaire was successful in convincing respondents to answer all of the items.

Between Civil Service employees and commissioned officers, no observable differences in mean item response rates were computed. The response rate of questions answered by physicians in the Civil Service was approximately 97 percent; and the response rate by those in the Commissioned Corps was approximately 98 percent. Similarly, among the twelve regions and the four groups of physician titles, no observable variations in mean item response rates were achieved. Although, within the IHS region category, mean values ranged between a lower bound of 93 percent and an upper bound of almost 100 percent. Moreover, the variability in the item response rate -- as measured by the standard deviation -- within the lower mean value reported in the Headquarters region was much higher than the variability computed in the other regions, as well as in the overall survey population. On the other hand, the variability within the higher mean response rate reported in the California region was much lower in comparison to both the other regions and the overall population.

Within the job title category, mean item response rates ranged between 92 and 99 percent. Again, the variability within the lower mean value computed in the "Other" respondent group was much higher than the variability reported in the remaining job title groups, as well as in the overall survey population.

Table 2.2: Percent of Questions Answered

	N	MEAN	STD
All Respcmdents	649	97.381	6.111
Type of Employee			
Civil Service	300	97.081	5.421
Commissioned Corps	349	97.651	6.641
IHS Region			
Missing	41	97.77)	6.01
/Headquarters	431	92.541	15.05
Aberdean	51	96.67	6.291
Alaska	701	96.65	6.821
Albuquerque	45	98.621	2.20
Bemidji	20	97.421	4.261
Billings	44	98.41	2.181
California	8	99.611	0.711
Nashville	5	97.051	4.15
Navajo	138	98.19	3.631
Oklahoma	74	97.391	5.501
Phoenix	88	97.96)	3.43
Portland	221	97.441	6.221
Job Title			
Missing	41	97.771	6.011
ID i rector/Chief	91	98.371	3.141
Medical Officer	339	97.191	5.20
Clinical Spity	138	98.54)	3.15
Other	40	92.371	16.06

2.4 Characteristics of Respondents

2.4.1 Job Characteristics

Table 2.3 compares job characteristics of survey respondents by type of employee to determine whether there are any observable differences between Civil Service employees and commissioned officers, as well as within particular categories of job characteristics. We defined the following six categories of job characteristics based on questions in the physician survey and on data in the IHS administrative data file: Primary Specialty; Primary IHS Assignment; Percent of Time Spent in Non-Patient Care; Job Title; Total Annual Salary; and IHS Region.

In the overall survey population, approximately 70 percent are primary care physicians. We defined primary care to include all physicians in family practice, general internal medicine, and general pediatrics. The distribution of primary care and non-primary care physicians by type of employee is very similar. Exactly 70 percent of Civil Service employees and almost 71 percent of commissioned officers are primary care physicians.

With respect to primary IHS assignment, the majority of survey respondents -- approximately 81 percent -- are patient care providers. More than 14 percent of the respondents are clinical administrators, and the remaining either are general administrators or have some other primary IHS assignment. There are slight differences in the distributions of these primary assignments between Civil Service and Commissioned Corps physicians. Exactly 89 percent of Civil Service employees are patient care providers, and 8 percent are clinical administrators. Approximately 74 percent of commissionedofficers are patient care providers, and 19 percent are clinical administrators. However, the majority of clinical administrators -- approximately 73 percent -- are Commissioned Corps physicians.

Almost 78 percent of the survey respondents spend either no time or less than 25 percent of their time in non-patient care activities. Civil Service physicians allocate slightly fewer hours to non-patient care in comparison to the overall respondent population, while commissioned officers allocate slightly more. Specifically, 85 percent of Civil Service employees and 71 percent of commissioned officers reported that they spend either no time or less than 25 percent of their time in non-patient care.

In the job title category, more than 50 percent of the overall survey respondents are medical officers. However, there are observable differences in the distribution of these officers between Civil Service and Commissioned Corps physicians. All but one Civil Service physician are medical officers. Moreover, the majority of medical officers -- approximately 88 percent -- are Civil Service employees. On the other hand, less than 12 percent of Commissioned Corps physicians are medical officers. The

majority of commissioned officers are either clinical specialists -- approximately 40 percent -- or medical directors or chiefs -- approximately 26 percent.

For the total annual salary category, we defined six salary ranges. These salaries include bonuses and other incentive pay provided to IHS physicians. Observable differences exist in the distribution of annual salaries between Civil Service and Commissioned Corps physicians. More than 50 percent of the Civil Service employees are in the $60,000 to $69,999 salary range. Moreover, the majority of physicians in that range -- approximately 87 percent -- are Civil Service employees. On the other hand, salary ranges for the Commissioned Corps physicians are more or less evenly distributed between $60,000 and $100,000 -- with more than 50 percent reporting salaries between $90,000 and $100,000. These differences in annual compensation between Civil Service and Commissioned Corps physicians result from the higher value of incentive pay provided to those in the Commissioned Corps. Salary ranges and grade levels reported on the IHS administrative files are consistent with current payment practices.

The majority of the overall respondent population appears in four primary IHS regions: Navajo, Phoenix, Oklahoma, and Alaska. Only two regions -- California and Nashville -- report very few physicians. Among the heavily populated regions, there are some observable differences in the distribution between Civil Service and Commissioned Corps physicians. The majority of physicians in the Navajo region -- approximately 64 percent -- are in the Civil Service, and the majority in the Alaska region -- approximately 81 percent -- are commissioned officers.

Table 2.3: Job Characteristics of Respondents

	All Respondents		Type of Employee: Civil Service		Type of Employee: Commissioned Corps	
	N	% of cot Total	N	% of col Total	N	% of cot Total
All Respondents	649	100.00	300	100.00	3491	100.00
Primsry Specialty						
Missing	9	1.391	5	1.67	4	1.151
Primsry Care	4571	70.421	210	70.001	247	70.77
Non-Primary Care	183	28.201	85	28.331	98	28.081
Primary IHS Assignment						
Missing	5	0.771	2	0.671	3	0.861
Ptnt Care Prvd	5261	81.05	267	89.001	259	74.211
Clinical Admin	91	14.021	25	8.331	66	18.911
General Admin	17	2.621	4	1.331	13	3.72
[Other	10	1.541	2	0.671	8	2.29
Percent of Time in Non-Patient Care						
Missing	16	2.471	5	1.671	11	3.15
0	141	21.73	88	29.331	531	15.19
>0 and <25	363	55.931	167	55.671	196	56.16
>=25 and <50	58	8.941	261	8.671	321	9.171
>=50	71	10.941	14	4.671	57	16.331
Job Title						
Missing	41	6.321	'I	0.331	40	11.461
Director/Chief	91	14.021	'I	0.331	· 90	25.791
Medical Officer	3391	52.231	298	99.331	41	11.751
Clinical Splty	138	21.261			138	39.541
Other	401	6.161			401	11.46

	Type of Employee					
	All Respondents		Civil Service		Commissioned Corps	
	N	% of cot Total	N	% of cot Total	N	% of cot Total
Base Salary(annual)						
Missing	31	4.781	1	0.33	30	8.60
<60,000	72	11.09	58	19.331	14	4.01
60,000 - 69,999	189	29.121	164	54.67	251	7.16
70,000 - 79,999	117	18.031	63	21.001	541	15.47
80,000 - 89,999	63	9.71	13	4.331	501	14.33
90,000 - 99,999	551	8.471	1	0.331	541	15.47
>=100,000	122	18.80			122	34.96
IHS Region						
Missing	41	6.32)	1	0.331	401	11.46
Headquarters	43	6.63	5	1.671	38	10.89
Aberdean	51	7.861	46	15.331	5	1.43
Alaska	70	10.791	13	4.33	571	16.33
Albuquerque	451	6.931	13	4.331	321	9.17
Bemidji	201	3.081	7	2.331	13	3.72
Billings	44	6.78	391	13.001	5	1.43
California	8	1.23			8	2.29
Nashville	5	0.771	3	1.001	2	0.57
Navajo	138	21.261	89	29.671	491	14.04
Oklahoma	741	11.401	391	13.00	35	10.03
Phoenix	88	13.561	38	12.671	501	14.33
Portland	22	3.39	7	2.331	15	4.30

2.4.2 Personal Characteristics

Table 2.4 compares personal characteristics of survey respondents by type of employee to examine whether significant differences exist between Civil Service and Commissioned Corps physicians, as well as within particular categories of personal characteristics. We defined the following ten categories of personal characteristics based on questions in the physician survey and on IHS administrative data: Gender; Ethnicity; Age; Marital Status; Age of Children; Graduate Medical School Type; Activities prior to MS; Years of Experience in IHS; Board Certification in Primary Specialty; and Type of Community (in which the physician resided at 16 years of age).

According to the data reported in this table, the majority of survey respondents are white, non-Hispanic males, over the age of 30, and married. Within these four categories, no observable differences exist between Civil Service and Commissioned Corps physicians. In addition, the majority of physicians in both the Civil Service and Commissioned Corps do not have any children of pre-school age -- nor do they have any school-age children.

The majority of respondents -- approximately 53 percent received their medical education from public institutions, and 31 percent graduated from private institutions. The distributions of school type by type of employee are relatively similar. However, the majority of international medical graduates (IMGs) -- approximately 80 percent -- are Civil Service employees.

Prior to joining the IHS, the majority of survey respondents -- almost 64 percent -- were receiving their graduate medical education. Another 26 percent were involved in some form of clinical practice. These findings were true for both Civil Service and Commissioned Corps physicians. The majority of both Civil Service employees and commissioned officers -- 56 and 70 percent, respectively -- were receiving their graduate medical education prior to joining the IHS.

Respondents, on average, have limited experience in the II-IS. The majority of survey respondents -- approximately 61 percent -- have less than six years of experience in the IHS. Similarly, almost 80 percent of Civil Service physicians report less than six years of experience. The distribution of commissioned officers, however, is quite different. Only 45 percent of these physicians have less than 6 years of experience, and another 35 percent have more than 10 years of experience. Moreover, among those with more than ten years of service, the majority -- approximately 88 percent -- are in the Commissioned Corps.

More than 67 percent of the survey respondents are board certified in their primary specialty. Similarly, the majority of both Civil Service employees and commissioned officers -- almost 61 and 73 percent, respectively -- are board certified.

The final category of personal characteristics reports a relatively even distribution among type of community for the overall survey population, as well as for the two groups of employees. Among Civil Service employees, approximately 30 percent resided in urban communities at age 16, 34 percent resided in suburban communities, and 33 percent resided in rural communities. Similarly, among Commissioned Corps employees, approximately 26 percent lived in urban areas, 37 percent lived in suburbs, and 36 percent lived in rural areas.

Table 2.4: Personal Characteristics of Respondents

	ALL Respondents		Type of Employee: Civil Service		Type of Employee: Commissioned Corps	
	N	Xof Cot Total	N	% of Col Total	N	% of cot Total
All Respondents	649	100.00	300	100.00	349	100.00~
Gender						
Missing	4	0.621	2	0.671	2	0.57
Male	4711	72.571	212	70.671	259	74.211
Female	174	26.811	86	28.671	88	25.211
Ethnicity						
Missing	9	1.391	6	2.001	3	0.86
White, non-Hisp.	4931	75.961	211	70.331	282	80.801
White Hispanic	29	4.471	20	6.671	9	2.581
Black	271	4.161	16	5.331	11	3.151
Native American	431	6.631	22	7.331	21	6.021
Other	48	7.401	251	8.331	23	6.59
Age						
Missing	10	1.541	6	2.00	4	1.15
<=30	541	8.321	351	11.671	19	5.441
31-40	323	49.771	152	50.67	171	49.00
41-50	159	24.501	47	15.671	112	32.09)
>50	103	15.871	60	20.00	43	12.321
Marital Status						
Missing	18	2.771	11	3.671	7	2.011
Married	491	75.65	216)	72.00	2751	78.801
Never Married	70	10.791	391	13.001	31	8.881
Other	70	10.791	341	11.331	361	10.321

Table 2.4: Personal Characteristics of Respondents

	Type of Employee					
	All Respondents		Civil Service		Commissioned Corps	
	N	% of col Total	N	% of col Total	N	% of col Total
Pre-school Kids?						
No	436	67.18	210	70.001	226	64.761
Yes	213	32.821	90	30.001	123	35.24
School-age Kids?						
No	446	68.721	229	76.331	217)	62.18
Yes	2031	31.28	71	23.671	132	37.82)
School Type						
Missing	13	2.001	6	2.001	7	2.011
Public	341	52.541	161	53.671	180	51.581
Private	204	31.431	77	25.671	127	36.391
Canadian	2	0.311	1	0.331	1	0.291
(Other Foreign	41	6.321	331	11.001	8	2.291
[Osteopathic	48	7.401	22	7.33)	26	7.45)
[Activities Prior to IHS						
Missing	5	0.77	3	1.001	2	0.571
Grad Med Educ	414	63.791	169	56.331	245	70.201
Clinicl,Excl Gov	591	9.09	35	11.671	241	6.88)
Other Clinical	112	17.261	69	23.001	431	12.321
Other	591	9.09	241	8.00	351	10.031
Years of Experience in IHS						
Missing	8	1.231	6	2.00)	2	0.57
0-5 yrs	396	61.021	239	79.671	157	44.991
6-10 yrs	106	16.331	39	13.001	67	19.201
>10 yrs	139	21.421	16	5.331	123	35.241

Table 2.4: Personal Characteristics of Respondents

	All Respondants		Type of Employee			
			Civil Service		Commissioned Corps	
	N	% of cot Total	N	% of cot Total	N	% of col Total
Board Certified in Primary Specialty?						
Missing	12	1.85	Cl	1.331	8	2.291
Yes	440	67.801	184	61.331	256	73.351
No	197	30.351	112	37.331	85	24.361
Type of Community When 16 Years Old						
Missing	14	2.161	8	2.671	6	1.721
Urban	180	27.731	89	29.671	91	26.071
Suburban	231	35.591	103	34.331	128	36.681
Rural	2241	34.511	100	33.331	124	35.531

III. OVERVIEW OF THE SURVEY RESULTS ON SATISFACTION

3.1 Satisfaction Scores

Survey respondents were asked to assess 17 aspects of employment in the IHS based on a scale between 1 (very dissatisfied) and 5 (very satisfied).[2] For analytical purposes, we converted these scores to ones ranging from -2 (very dissatisfied) to +2 (very satisfied).

Table 3.1 displays the 17 dimensions ranked by respondents. The order of the table shows the highest ranked areas first, followed by those with smaller percentages of respondents who were very satisfied. Over 80 percent of survey respondents reported that they were satisfied with the quality of care that IHS provides to patients. The second highest rated area was relations with the Native American community, which received high ratings from over three quarters of all respondents.

We should note that in this and other tables on physician satisfaction, scoring for the question on number of medical support staff differed from the others. Respondents were asked whether the number of support staff was inadequate (-2) or adequate (+2). Although some respondents wrote in intermediate scores, and we coded them as such, there was a larger than average group of respondents at the extremes of this distribution.

Areas receiving the lowest percentages of positive scores were questions regarding the future of medical careers in the IHS, current housing benefits, and the adequacy of IHS clinical facilities. Less than one third of all respondents rated career development opportunities in the IHS in a positive light. A similar percentage rated housing benefits positively. Slightly higher percentages of positive answers were offered when physicians were asked about future compensation and the physical facilities.

Another way to examine these satisfaction ratings is to focus on those respondents with strong negative views. Table 3.2 rearranges the scores in the seventeen dimensions to show the largest negatively, scored dimensions first. The dissatisfaction with the number of medical support staff was widespread, but the question format may lead us to discount the intensity somewhat, particularly in light of the high score shown in the previous table.

The IHS loan repayment program was rated only by those physicians who have received those benefits. Of the 152 respondents who rated the program, over 40 percent expressed some dissatisfaction. Exactly one quarter of all participants in the program gave it the lowest marks. Offsetting these respondents were the significant numbers of physicians providing positive ratings. In fact, as Table 3.4 will show, the loan repayment program is an area of significant disagreement among respondents. An

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The actual scale used for different questions on respondent satisfaction ranged from either dissatisfied (1) to satisfied (5), poor (1) to excellent (5), or inadequate (1) to adequate (5).

examination of satisfaction as a function of the maximum loan amount that could have been repaid revealed no clear relationship between satisfaction and the size of the benefit. The average amount that could have been repaid by IHS was reported at $40,000.

table 3.1: Summary of Satisfaction Scores, by Category
• * in Descending Order of Percent uith Highest Score **

Satisfaction Category	N	Satisfaction Score -2	-1	0	+1	+2
Quality of Care	631	0.48	2.22	14.58	52.93	29.79
Relations with Native Americans	636	1.26	3.63	20.03	45.43	29.65
Local Living Conditions	629	3.82	6.04	19.40	41.34	29.41
Job Opportunities for Spouse	512	14.84	12.11	20.70	23.24	29.10
Number of Medical Support Staff	607	64.09	3.29	1.98	1.81	28.83
Patient Care Hours	634	3.31	11.04	16.09	43.69	25.87
Quality of Medical Support Staff	629	3.34	9.54	30.05	42.45	14.63
Loan Repayment Program	152	25.00	17.11	13.82	29.61	14.47
Referral Services	635	4.57	14.96	29.13	37.64	13.70
Impact on the Family	610	5.90	12.13	31.15	37.54	13.28
CME Opportunities	635	9.45	14.80	30.24	32.28	13.23
Administrative Support	635	15.91	20.94	23.62	26.46	13.07
Annual Compensation	643	15.24	19.75	22.55	30.33	12.13
IHS Physical Facilities	632	15.19	20.57	29.59	25.63	9.02
Housing Benefits	565	16.46	15.75	38.41	21.24	8.14
Future IHS Compensation	633	13.43	20.38	31.60	26.54	8.06
Career Development Opportunities	627	13.72	22.17	36.04	21.69	6.38

Table 3.2: Summary of Satisfaction Scores, by Category
** in Descending Order of Percent with Lowest Score • *

Satisfaction Category	N	Satisfaction Score -2	-1	0	+1	+2
Number of Medical Support Staff	607	64.09	3.29	1.98	1.81	28.83
Loan Repayment Program	152	25.00	17.11	13.82	29.61	14.47
Housing Benefits	565	16.46	15.75	38.41	21.24	8.14
Administrative Support	635	15.91	20.94	23.62	26.46	13.07
Annual Compensation	643	15.24	19.75	22.55	30.33	12.13
IHS Physical Facilities	632	15.19	20.57	29.59	25.63	9.02
Job Opportunities for Spouse	512	14.84	12.11	20.70	23.24	29.10
Career Development Opportunities	627	13.72	22.17	36.04	21.69	6.38
Future IHS Compensation	633	13.43	20.38	31.60	26.54	8.06
CME Opportunities	635	9.45	14.80	30.24	32.28	13.z
Impact on the Family	610	5.90	12.13	31.15	37.54	13.28
Referral Services	635	4.57	14.96	29.13	37.64	13.70
Local Living Conditions	629	3.82	6.04	19.40	41.34	29.41
Quality of Medical Support Staff	629	3.34	9.54	30.05	42.45	14.63
Patient Care Hours	634	3.31	11.04	16.09	43.69	25.87
Relations with Native Americans	634	1.26	3.63	20.03	45.43	29.65
Quality of Care	631	0.48	2.22	14.58	52.93	29.79

3.2 Importance Scores

Tables 3.1 and 3.2 were arranged as if each of the 17 dimensions was equally important to survey respondents; clearly each dimension is not. To incorporate this factor, the survey also included questions on the importance of each dimension in the decision to continue employment with the IHS based on a scale between 1 (not important) and 5 (important). Again, for analytical purposes, we converted these scores to ones ranging from 0 (not important) to 4 (important).

Table 3.3 provides a summary of how respondents ranked the importance of each of the dimensions. Quality of care provided to patients was the most important issue for this group of physicians. The impact of work on family life was a close second. These are not surprising results. Quality of health care and family impact were frequently cited concerns in the 1982 and 1980 surveys, respectively. The importance of administrative support was ranked third in overall importance and was identified as a major issue in the 1980 survey. Housing benefits and physical facilities were ranked the lowest in importance among all the characteristics examined, but they too were important to a significant fraction -- with over 10 percent of the respondents ranking each dimension as very important.

Table 3.3: Summary of Importance Scores, by Category
** in Descending Order of Percent with Highest Score **

		Importance Score				
Importance Category	N	0	1	2	3	4
Quality of Care	633	4.58	3.63	9.79	33.02	48.97
Impact on the Family	608	6.74	3.78	17.60	29.11	42.76
Administrative Support	635	5.83	5.35	14.49	37.17	37.17
Job Opportunities for Spouse	508	15.35	9.65	16.14	22.05	36.81
Relations with Native Americans	636	7.70	5.66	16.35	35.22	35.06
Local Living Conditions	619	10.66	6.46	11.95	36.83	34.09
Quality of Medical Support Staff	635	5.04	5.83	15.28	40.47	33.39
Number of Medical Support Staff	635	5.98	6.14	19.53	39.84	28.50
Patient Care Hours	633	9.16	11.06	15.80	37.60	26.38
Future IHS Compensation	637	6.59	7.69	21.98	37.52	26.22
Annual Compensation	638	7.84	8.62	24.45	34.48	24.61
Loan Repayment Program	154	22.08	14.94	16.23	23.38	23.38
Career Development Opportunities	632	9.18	9.97	24.68	34.97	21.20
Referral Services	637	7.69	9.89	25.90	37.68	18.84
CME Opportunities	635	8.35	11.81	26.77	36.38	16.69
IHS Physical Facilities	638	7.52	13.79	29.47	35.42	13.79
Housing Benefits	574	18.99	16.03	29.62	23.00	12.37

3.3 Constructed Composite Rating for Each of the 17 Dimensions

As reported above, the quality of care dimension was ranked highly, both in terms of satisfaction and importance. To summarize these two rankings into a single number for both the quality of care dimension and the others, we constructed a special index. We scaled the satisfaction or dissatisfaction questions from -2 for the lowest positive ranking to +2 for the highest. If a respondent was neither satisfied nor dissatisfied, his or her score was zero, and we concluded that the IHS was perceived as neither better nor worse than alternative employment opportunities. We scaled importance from 0 for the lowest ranking to +4 for the highest. Then, for each respondent we multiplied the satisfaction score by the importance score. The highest possible score was +8 for a very important, highly satisfied pair of responses. An unimportant dimension received a score of zero no matter how well the IHS performed. Similarly, a middle score in satisfaction received a zero despite its importance ranking -- thus removing this factor from the decision to continue employment with the IHS.

Table 3.4 reports the results for each of the 17 dimensions from the dimension with the highest mean rating -- quality of patient care -- to the dimension with the lowest -- number of medical support staff. In addition to reporting the mean or average rating, this table shows the standard deviation -- a measure of the disagreement among respondents. Relative to the other dimensions, quality of care was not an area of significant respondent disagreement. On the other hand, number of medical support staff was an area of significant disagreement, as indicated by the largest computed standard deviation.

In addition to quality of patient care, relations with the Native American community, local living conditions, and the number of patient care hours per week received high average ratings. Low average ratings were computed in dimensions involving compensation and future professional development. The loan repayment program, which was negatively rated overall, was an area of significant disagreement, as identified by the large standard deviation.

Table 3.4: Summary of Composite Rating Score, by Category
• * in Descending Order of Mean Rating Score **

Category	N	Mean	Standard Deviation
Quality of Care	625	3.55	2.98
Relations with Native Americans	629	3.04	3.27
Local Living Conditions	617	2.49	3.54
Patient Care Hours	625	1.94	3.49
Quality of Medical Support Staff	624	1.59	3.28
Job Opportunities for Spouse	501	1.35	4.37
Impact on the Family	604	1.25	3.75
Referral Services	631	1.02	3.13
CME Opportunities	631	0.64	3.27
Housing Benefits	555	-0.07	2.90
Administrative Support	628	-0.19	4.22
IHS Physical Facilities	628	-0.28	3.35
Loan Repayment Program	149	-0.36	4.24
Annual Compensation	637	-0.42	3.83
Career Development Opportunities	623	-0.48	3.34
Future IHS Compensation	629	-0.58	3.56
Number of Medical Support Staff	601	-2.21	5.44

3.4 Categories of the 17 Dimensions

To better understand the nature of these responses, we grouped questions by substantive areas: quality or adequacy of care; quality or adequacy of staff and facilities; educational or career opportunities; personal finances; living conditions; and family-oriented dimensions. Table 3.5 rearranges the mean ratings and standard deviations reported in Table 3.4 by the six dimension categories. This table identifies both differences and similarities in average ratings among dimensions within a particular category. Within the quality or adequacy of care category, for example, quality of care in the IHS is highly rated, while referral services are given a lower rating. The difference in average ratings is a result of both the lower importance respondents attach to referral services and the lower satisfaction respondents receive with these services. The degree of consensus -- that is, the standard deviation -- is comparable for both of these dimensions. In terms of summarizing importance and satisfaction of a particular dimension, the constructed mean composite rating is a statistically adequate and convenient measure.

Charts 3.1-3.17 display the importance and satisfaction scores as provided by individual respondents. Respondents may fall into any of the 25 possible pairs of answers for satisfaction and importance. These graphs focus on individual dimensions in the same order as those reported in Table 3.5.

Quality/Adequacy of Care

The highest ranked quality of care dimension reported in Table **3.5** appears in Chart 3.1 with large numbers of respondents in the upper right-hand comer of the graph. The lower rating for referral services is shown by a clumping of respondents more toward the middle of Chart 3.2 than we observed in the first graph,

Qua&y/Adequacy of Staff/Facilities

Although administrative support was ranked highly in terms of importance, this dimension received a negative mean rating due to the large number of physicians who rated their satisfaction as either negative or neutral. This rating is supported by the large numbers of respondents on the right-hand side of Chart 3.3 -- with slightly heavier clumping toward the middle and lower right.

Number of medical support staff received an even more negative rating due to the larger number of dissatisfied respondents. This rating is supported by the position of the three largest groups of respondents in the lower right-hand corner of Chart 3.4. The quality of medical support staff dimension

is shown in Chart 3.5 with large groups of physicians appearing in the middle and upper right-hand sides -- thus producing a positive average rating.

Adequacy of IHS physical facilities received a negative average rating and is shown in Chart 3.6 with large numbers of respondents who were somewhat negative or neutral in terms of satisfaction but gave importance a neutral or somewhat positive score. Patient care hours received a positive average rating, as well as the highest rating among the other dimensions in its category. This number is supported by the position of three largest groups of respondents in the upper right-hand corner of Chart 3.7.

Education/Career Development Opportunities

As reported in Table 3.5, both education and career development opportunities received more or less neutral average ratings. Respondents scored these two dimensions relatively evenly in terms of satisfaction, but in terms of importance the majority of respondents assigned either neutral or high values. Charts 3.8 and 3.9 present these dimensions, respectively, with large numbers of respondents in the center and toward the right.

Finances

All three dimensions within the finances category received a negative mean rating, according to the numbers reported in Table 3.5. Charts 3.10 and 3.11 provide a similar display of the annual and future IHS compensation dimensions, respectively, with heavy clumping toward the right hand-side. The negative mean ratings can be attributed to those groups of respondents who assigned highly negative values to satisfaction and very high values to importance. Chart 3.12 which displays the loan repayment program dimension looks quite different due to the relatively small numbers of program participants among survey respondents. However, similar to the other two dimensions, the negative mean rating can be attributed to the group of participants who assigned highly negative values to satisfaction and high scores to importance.

Living Conditions

The highest ranked living conditions dimension -- relations with the Native American community -- appears in Chart 3.13 with the three largest groups of respondents in the upper right-hand corner of the graph, as well as with minimal numbers of physicians in the lower half. On the other hand, the

generally neutral rating for housing benefits is supported by the large numbers of respondents appearing in the center of Chart 3.14.

As with the community relations dimension, survey respondents gave local living conditions a positive average rating. Thus, Chart 3.15 is shown with heavy numbers of physicians in the upper right-hand corner of the graph and minimal numbers in the lower half.

Family Impact

Both the IHS family impact and the spousal employment opportunities dimensions received positive mean ratings. As displayed in Charts 3.16 and 3.17, respectively, the majority of respondents assigned high scores to both importance and satisfaction for these particular IHS features.

Table 3.5: Summary of Composite Rating Score, by Category
** by Category Group • *

Category Group	Category	N	Mean	Standard Deviation
Duality/Adequacy of Care	Quality of Care	625	3.55	2.98
	Referral Services	631	1.02	3.13
Quality/Adequacy of Facilities	Administrative Support	628	-0.19	4.22
	Number of Medical Support Staff	601	-2.21	5.44
	Quality of Medical Support Staff	624	1.59	3.28
	IHS Physical Facilities	628	-0.28	3.35
	Patient Care Hours	625	1.94	3.49
Education/Career Opportunities	CME Opportunities	631	0.64	3.27
	Career Development Opportunities	623	-0.48	3.34
Finances	Annual Compensation	637	-0.42	3.83
	Future IHS Compensation	629	-0.58	3.56
	Loan Repayment Program	149	-0.36	4.24
Living Conditions	Relations uith Native Americans	629	3.04	3.27
	Housing Benefits	555	-0.07	2.90
	Local Living Conditions	617	2.49	3.54
Family Impact	Impact on the Family	604	1.25	3.75
	Job Opportunities for Spouse	501	1.35	4.37

Chart 3.1: Relationship of Satisfaction to Importance

** Quality of Care • *

Frequency of IMPRT20 grouped by SATIS20

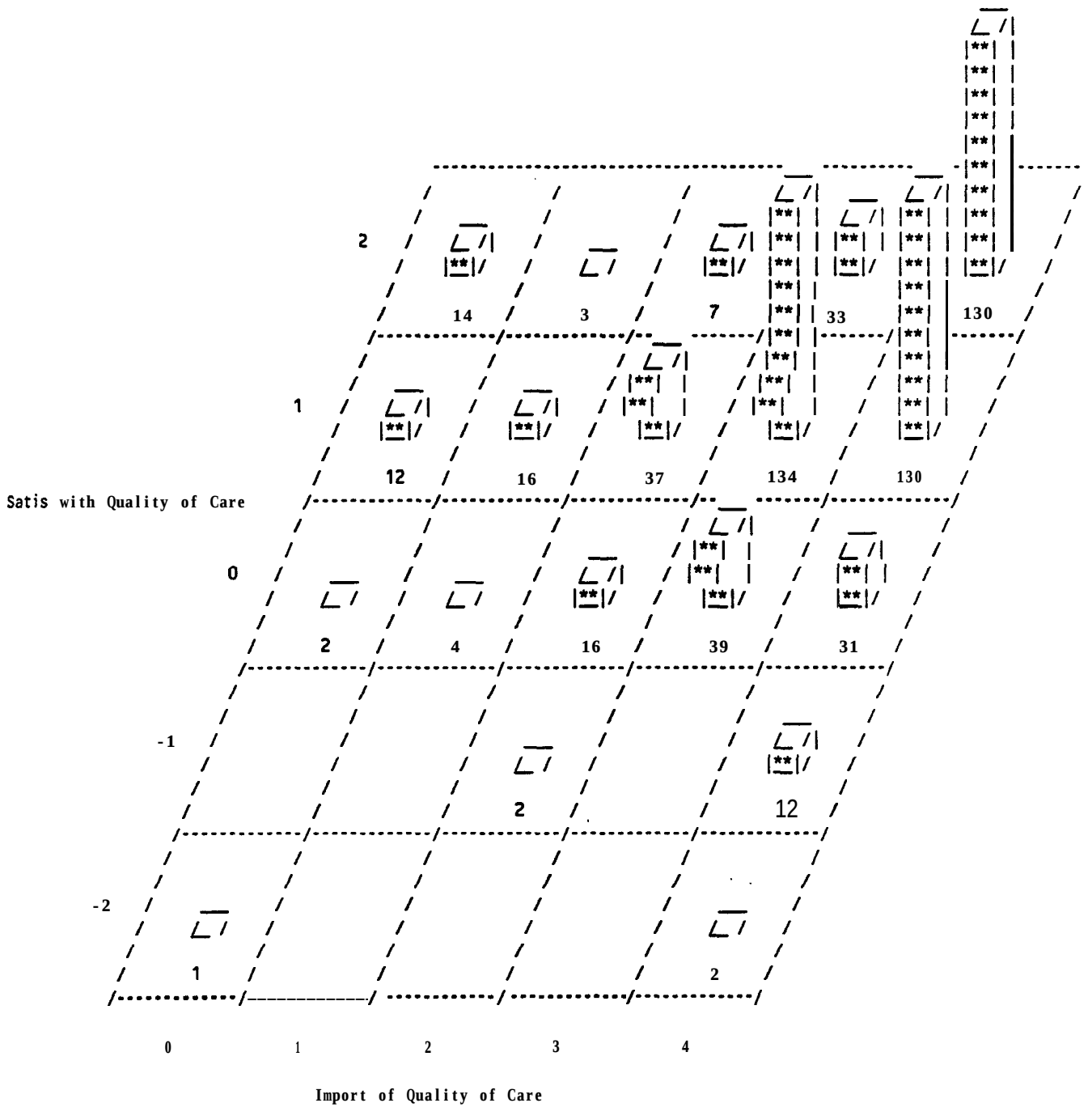


Chart 3.2: Relationship of Satisfaction to Importance

• * Referral Services • *

frequency of IMPRT19 grouped by SATIS19

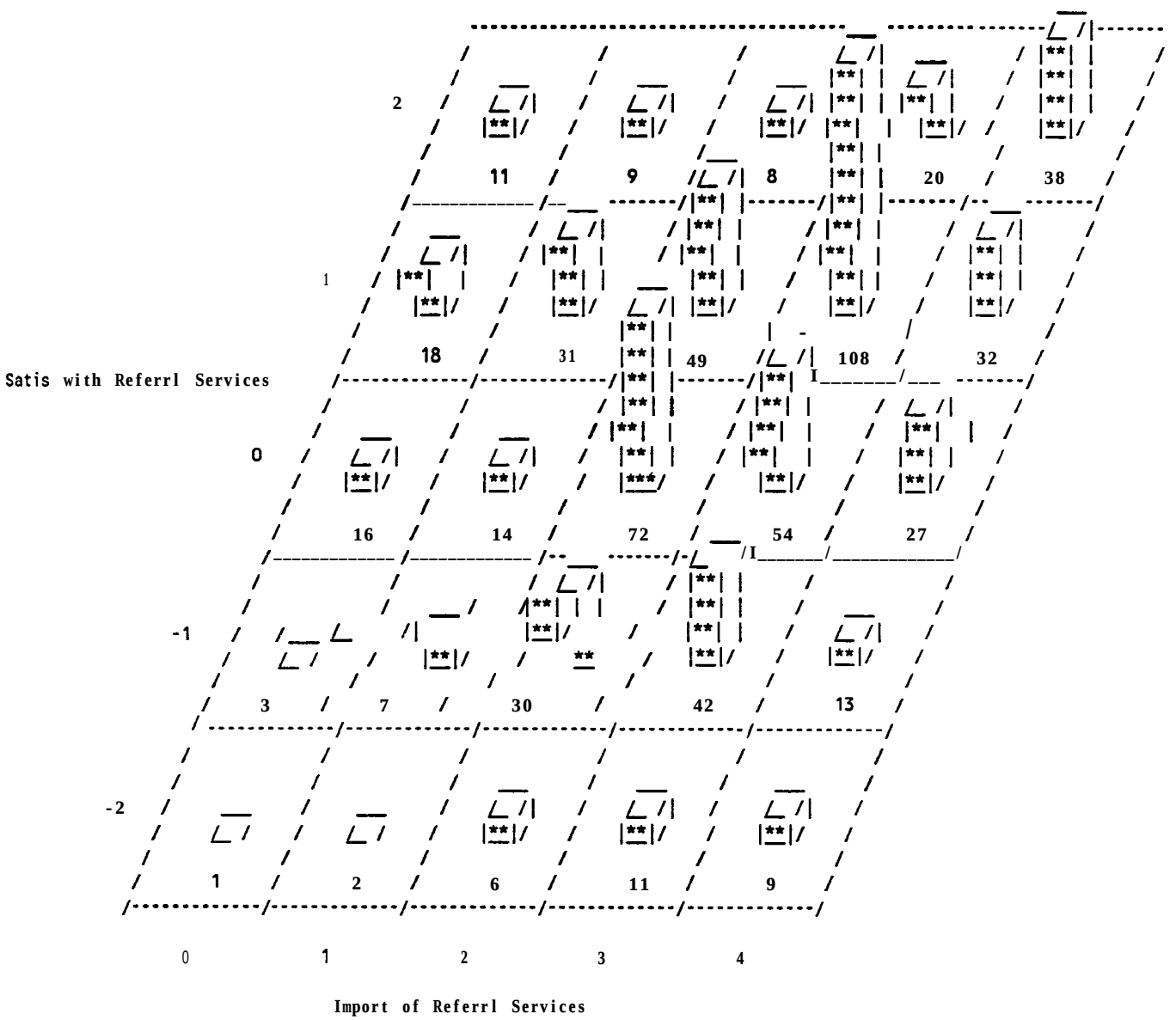


Chart 3.3: Relationship of Satisfaction to Importance

• * Administrative Support • +

Frequency of IMPRT15 grouped by SATIS15

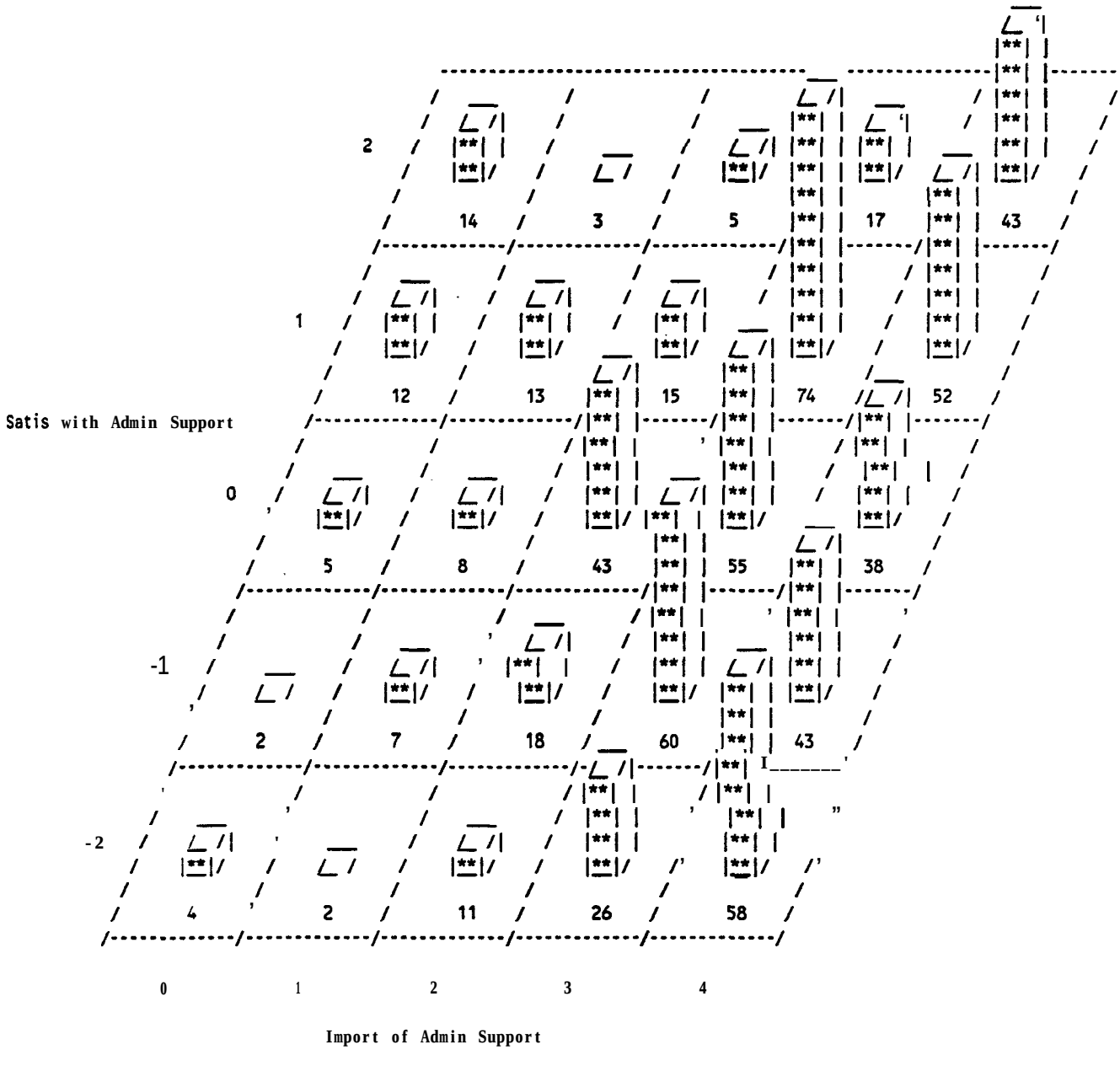


Chart 3.4: Relationship of Satisfaction to Importance
• * Number of Medical Support Staff **

Frequency of IMPRT16 grouped by SATIS16

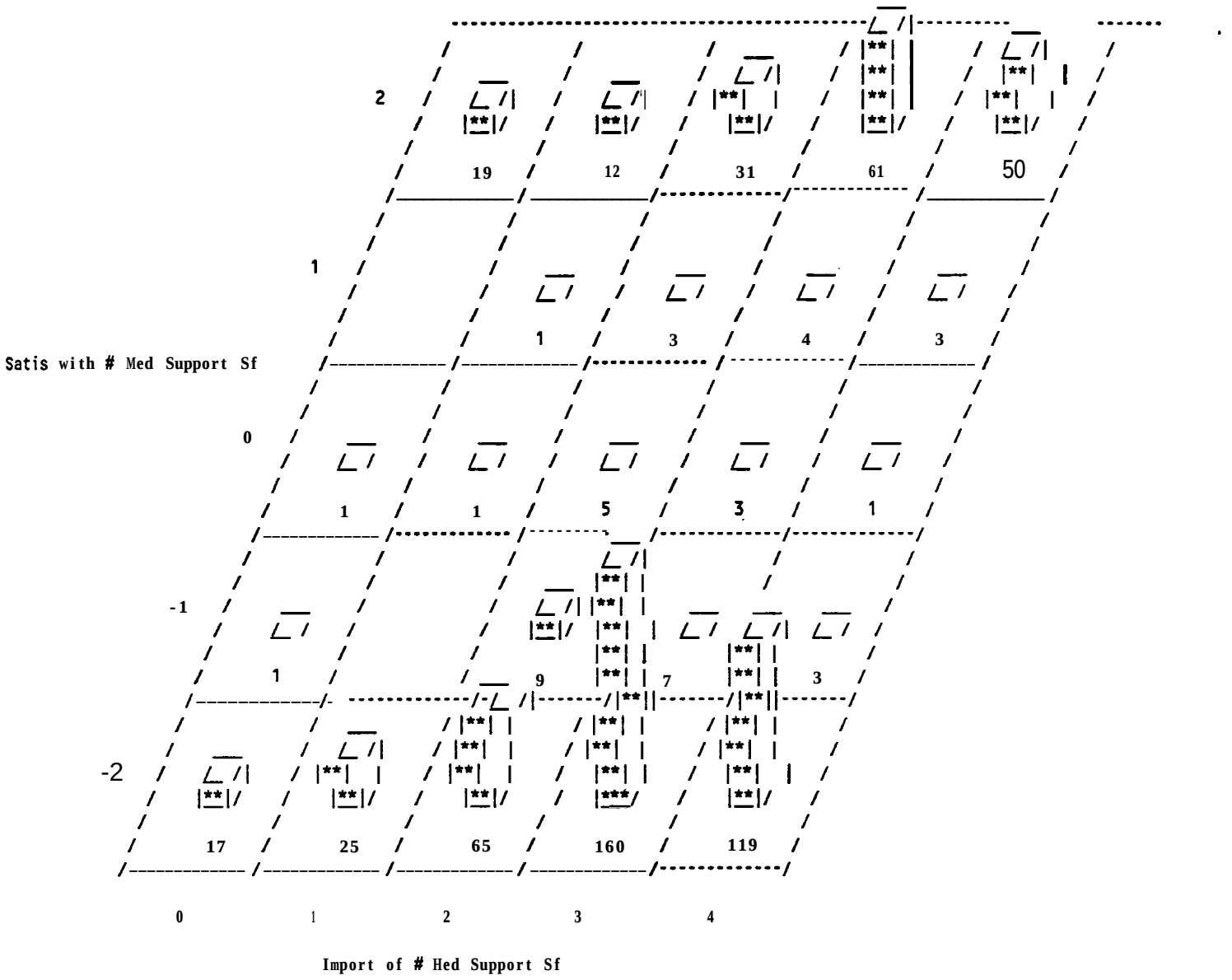


Chart 3.5: Relationship of Satisfaction to Importance
• * Puality of Medical Support Staff **

Frequency of IMPRT17 grouped by SATIS17

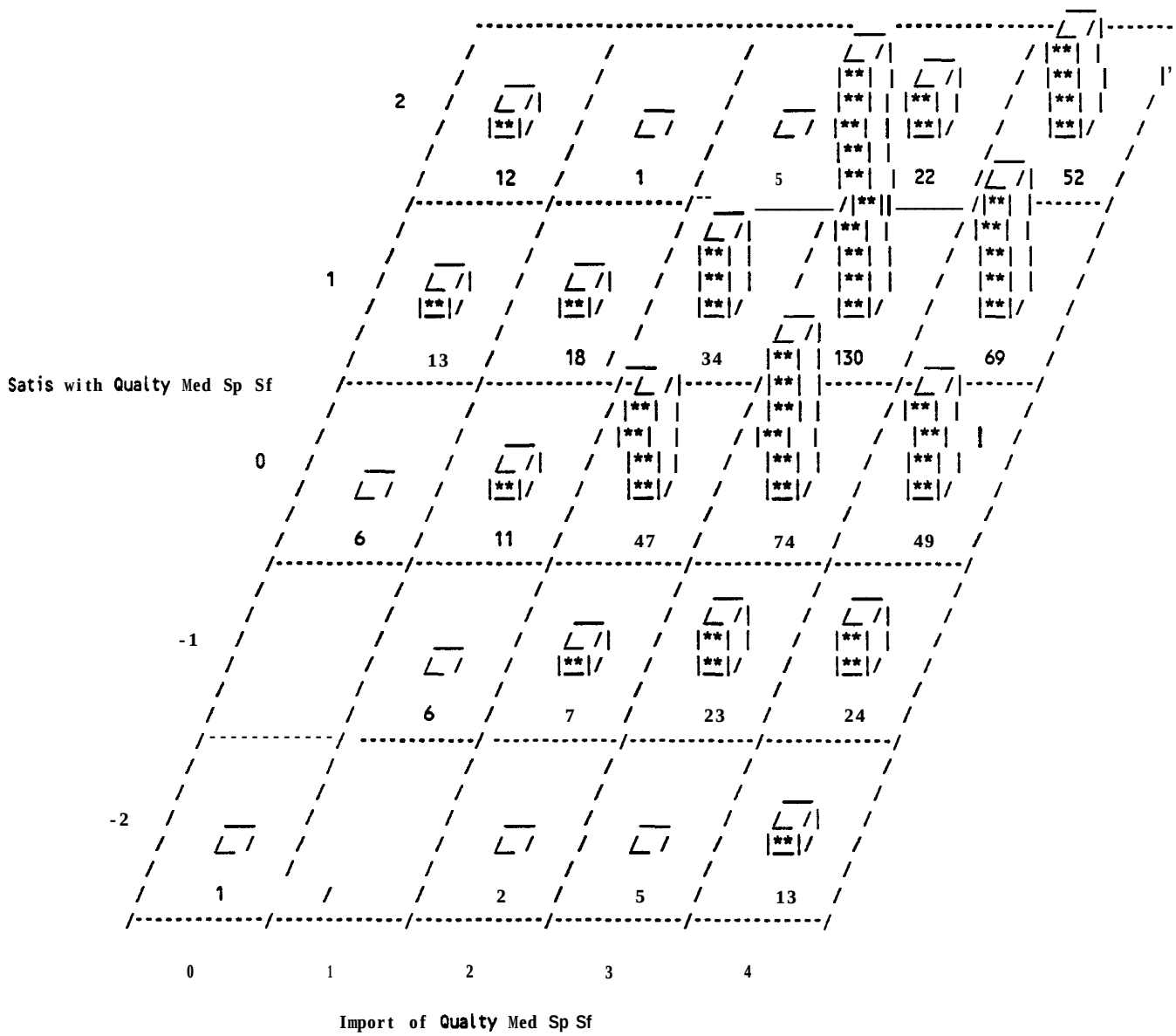


Chart 3.6: Relationship of Satisfaction to Importance
• * IHS Physical Facilities **

Frequency of IMPRT18 grouped by SATIS18

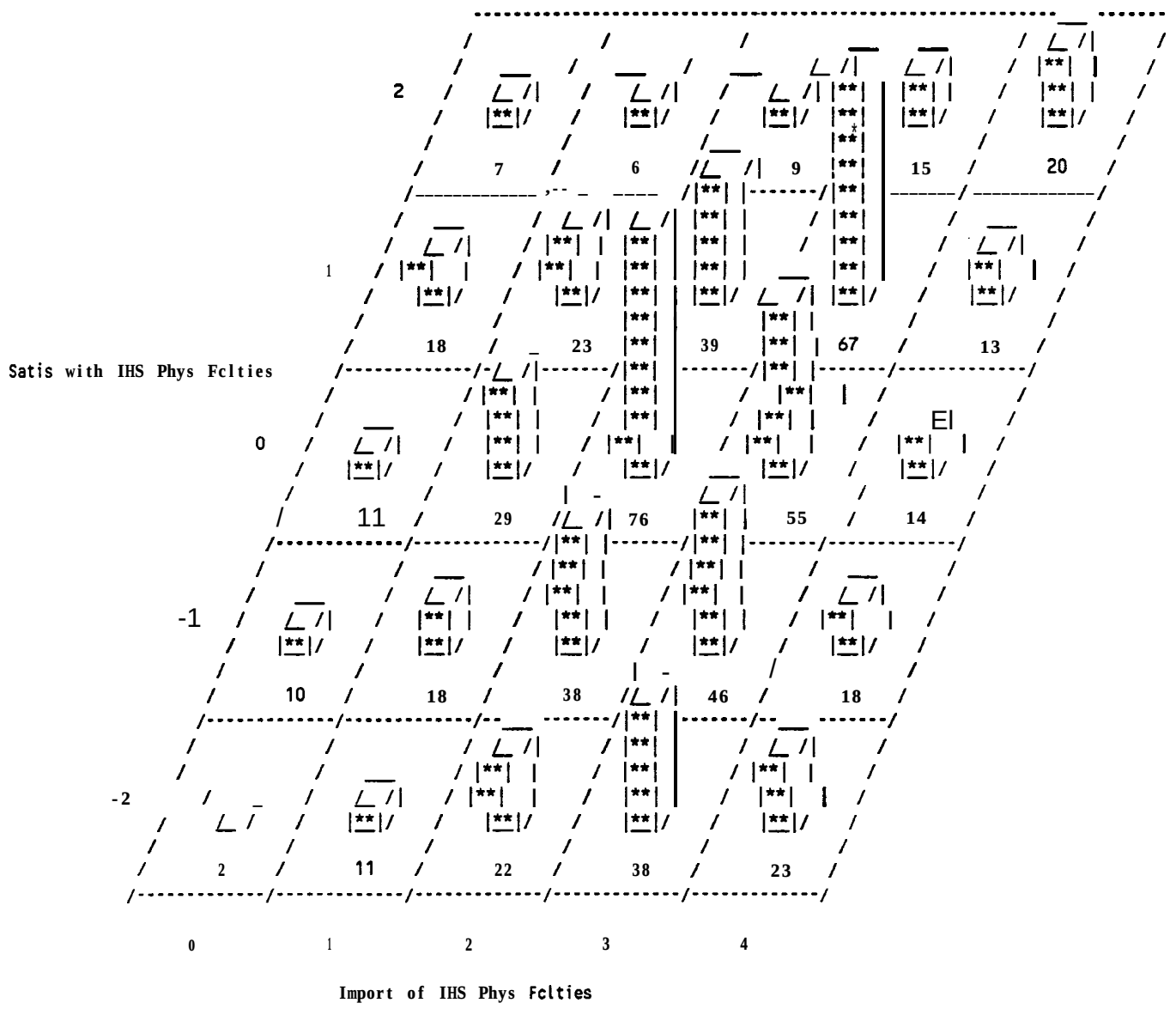


Chart 3.7: Relationship of Satisfaction to Importance

• * Patient Care Hours **

Frequency of IMPRT14 grouped by SATIS14

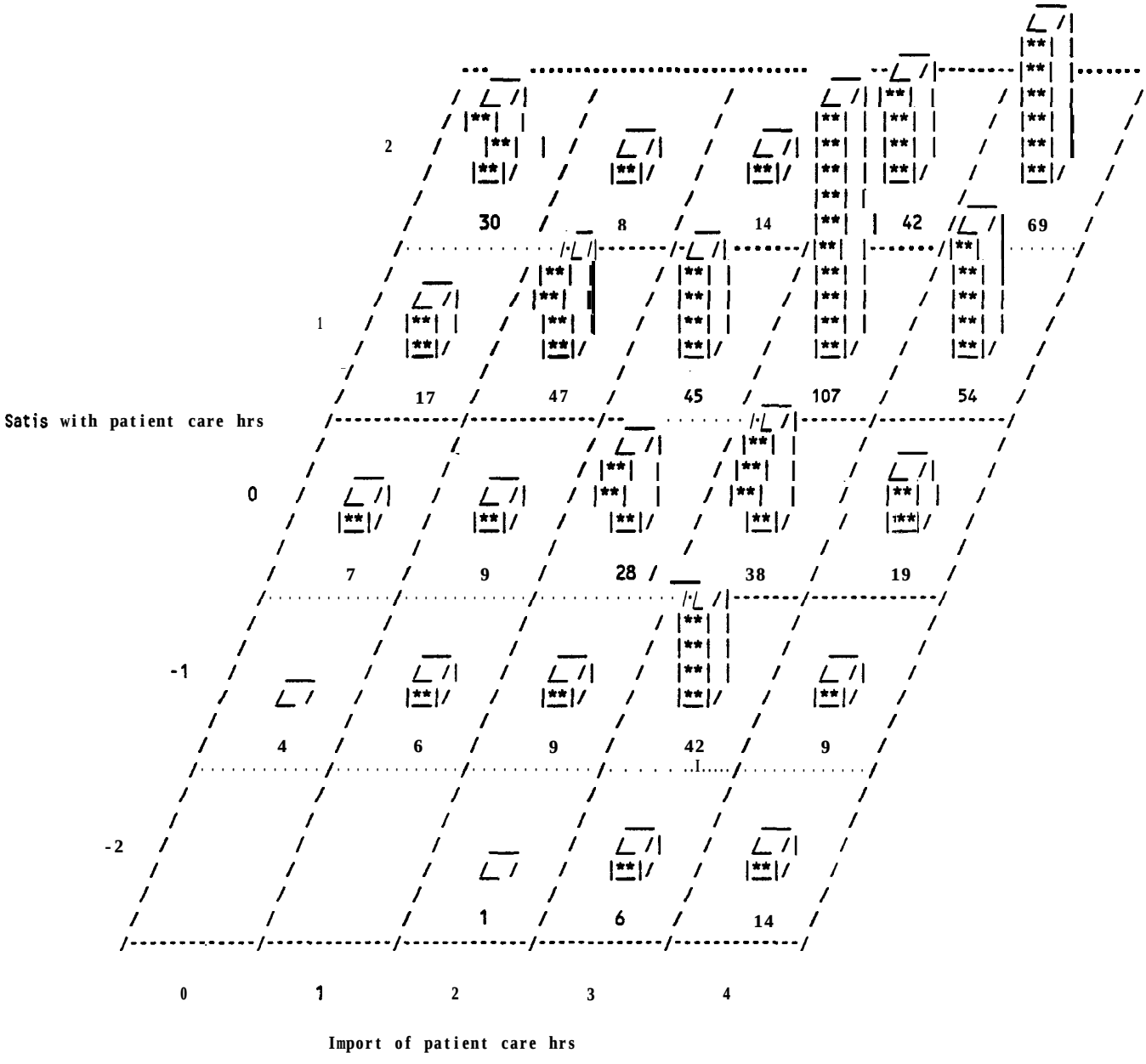


Chart 3.8: Relationship of Satisfaction to Importance

• * CME Opportunities • *

Frequency of IMPRT21 grouped by SATIS21

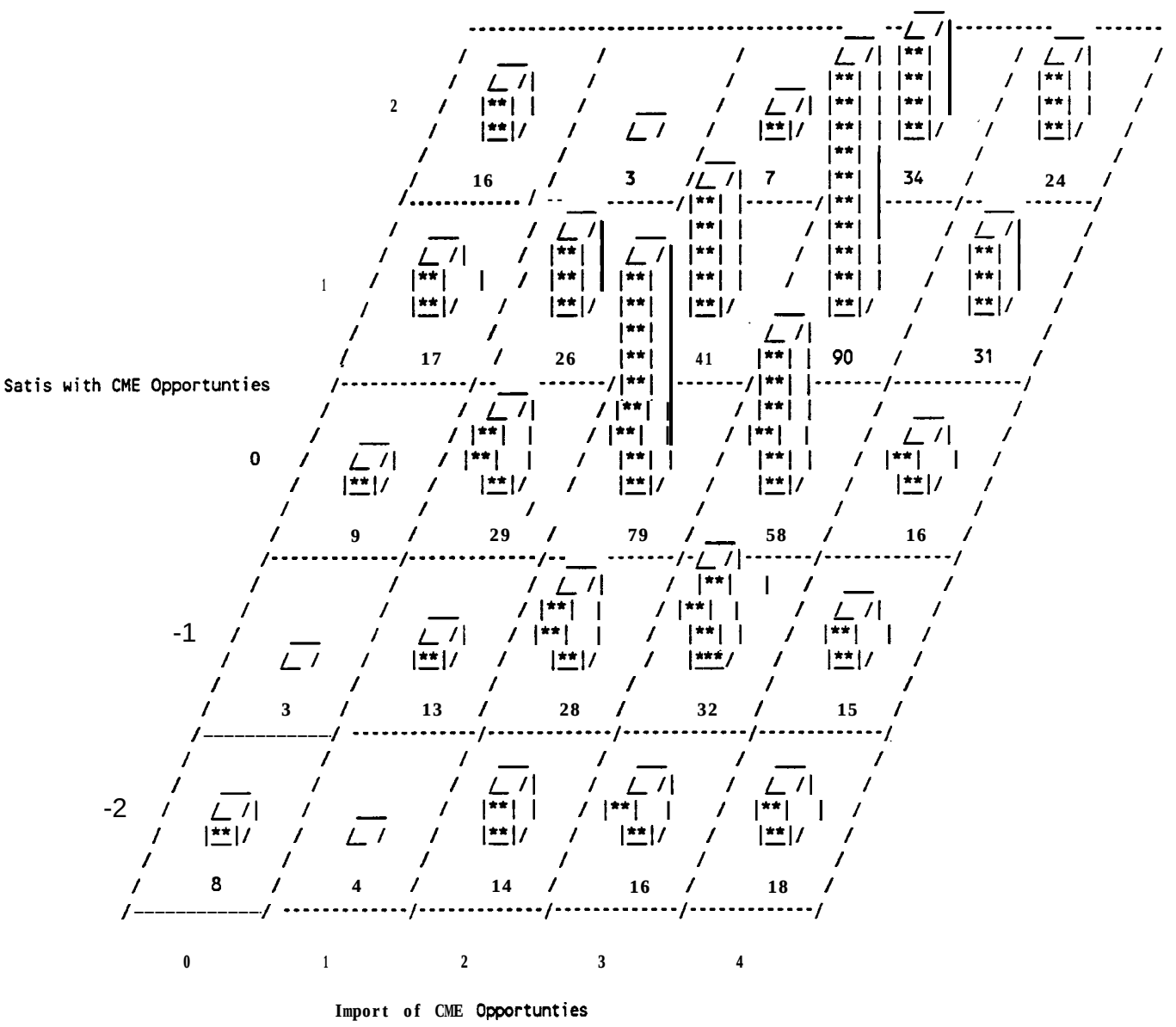


Chart 3.9: Relationship of Satisfaction to Importance
** Career Development Opportunities **

Frequency of IMPRT22 grouped by SATIS22

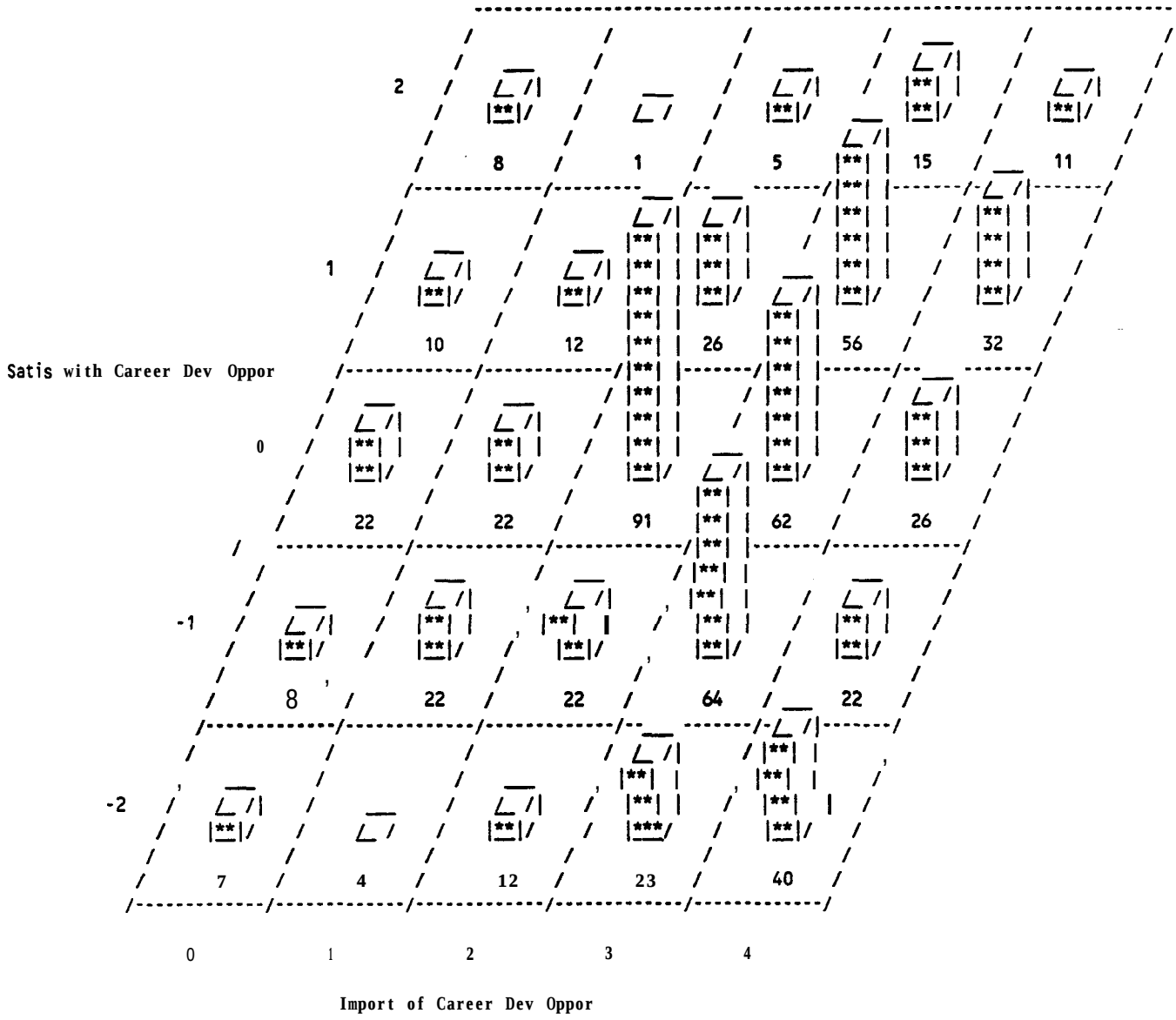


Chart 3.10: Relationship of Satisfaction to Importance
**** Annual Compensation • ***

Frequency of IMPRT24 grouped by SATIS24

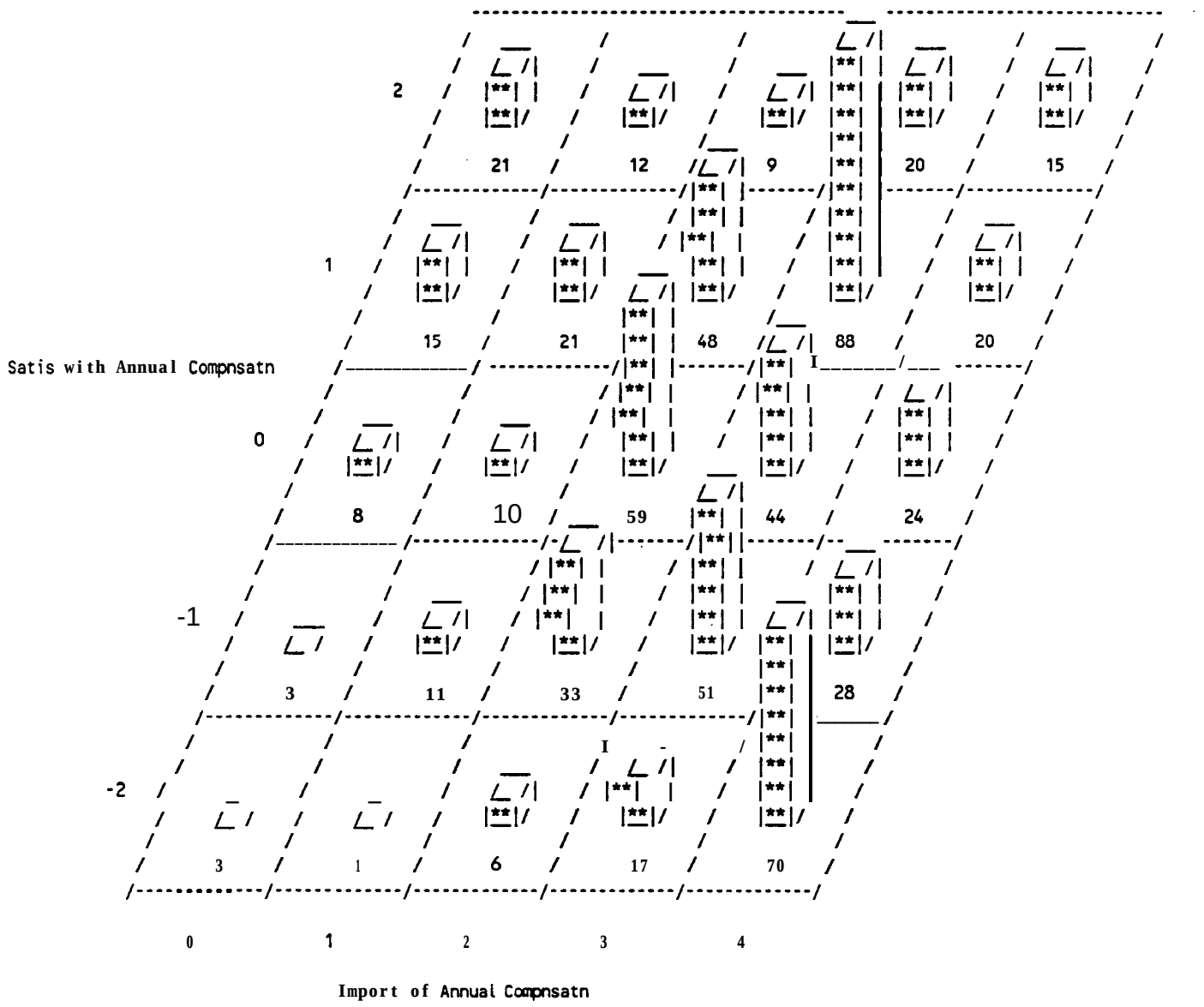


Chart 3.11: Relationship of Satisfaction to Importance

• * Future IHS Compensation **

Frequency of IMPRT25 grouped by SATIS25

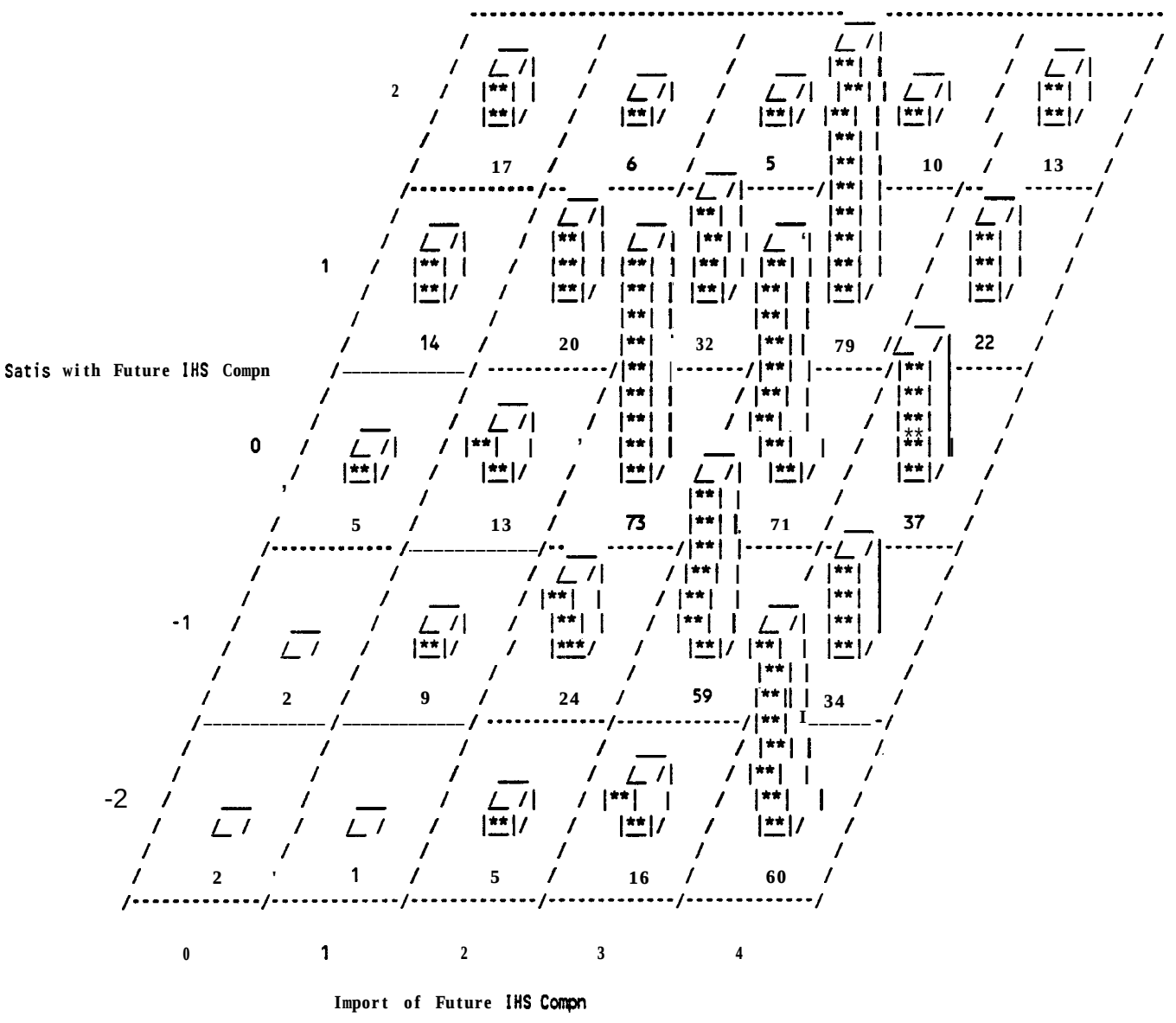


Chart 3.12: Relationship of Satisfaction to Importance

• * Loan Repayment Program • *

Frequency of IMPRT27 grouped by SATIS27

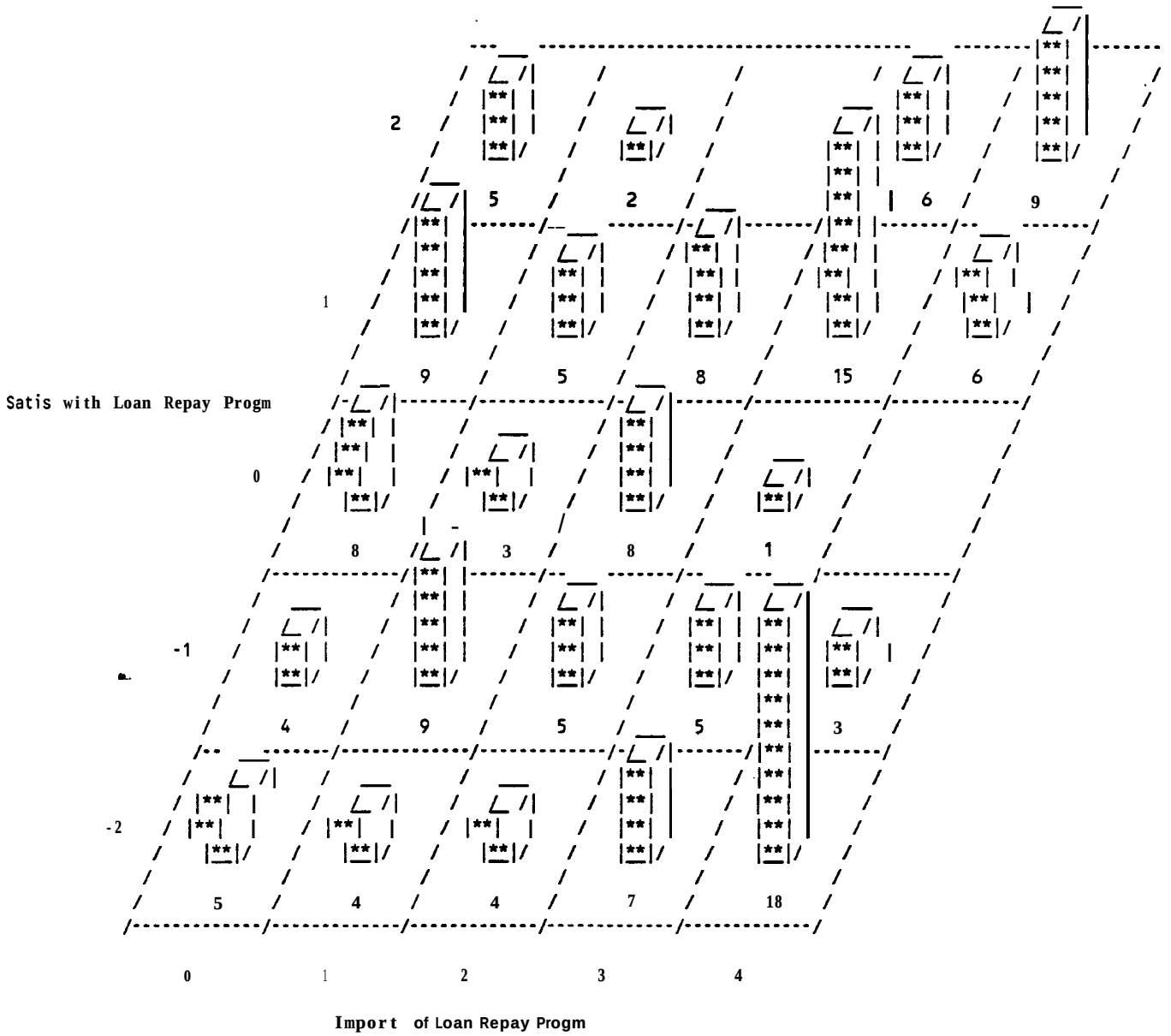


Chart 3.13: Relationship of Satisfaction to Importance
** Relations with Native Americans • *

Frequency of IMPRT23 grouped by SATIS23

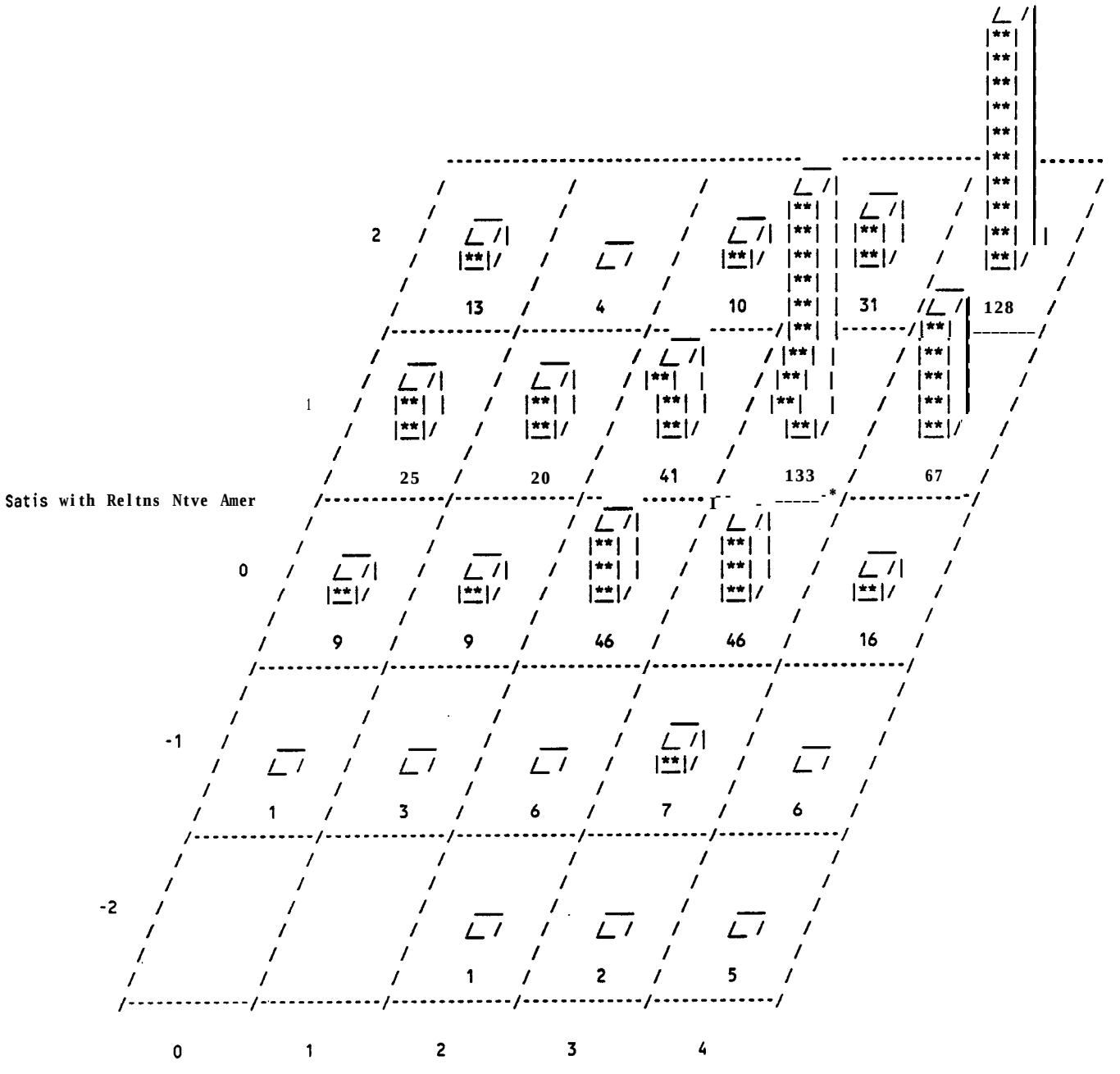


Chart 3.14: Relationship of Satisfaction to Importance

** Housing Benefits • *

Frequency of IMPRT28 grouped by SATIS28

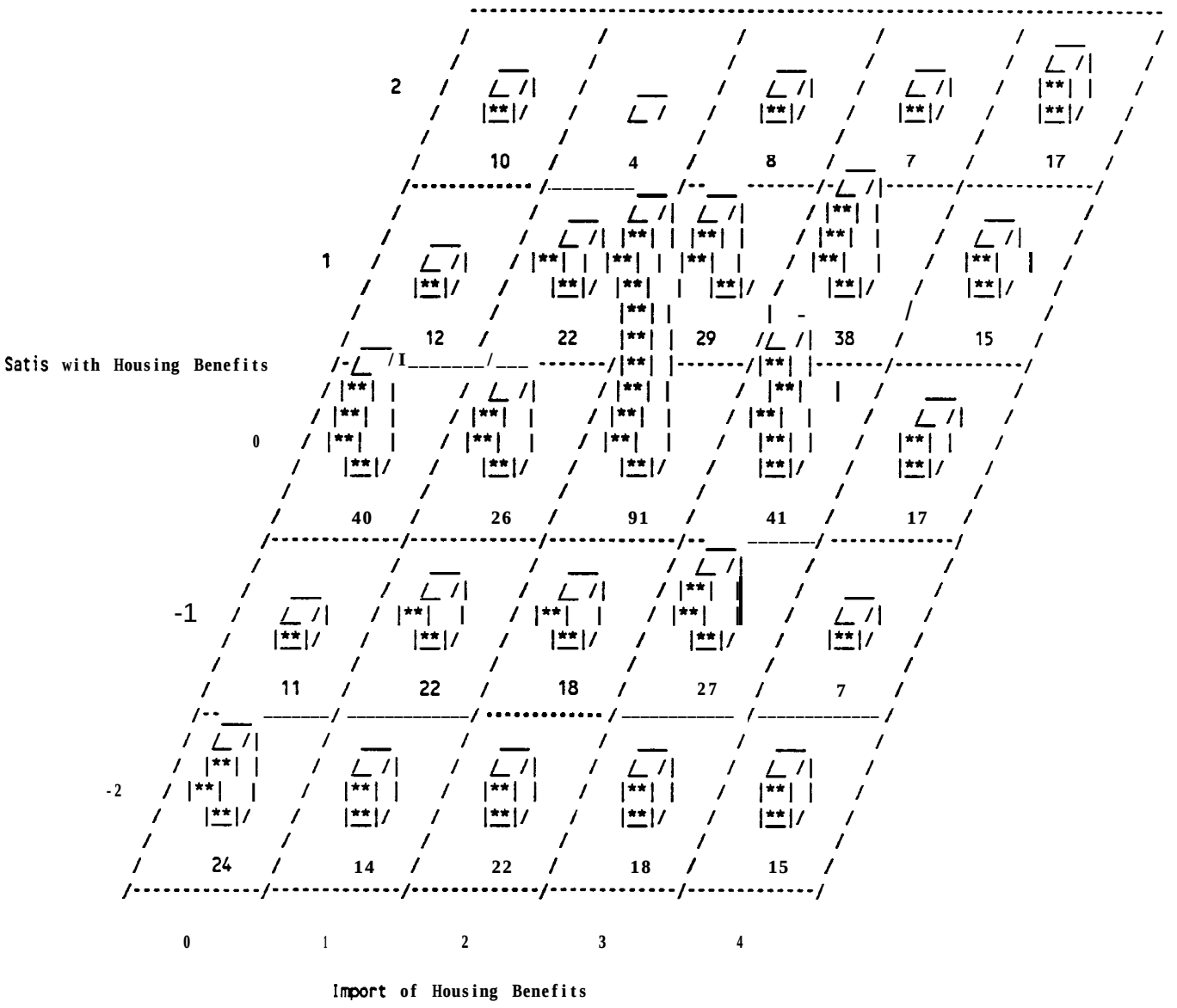


Chart 3.15: Relationship of Satisfaction to Importance
• * Local Living Conditions **

Frequency of IMPRT29 grouped by SATIS29

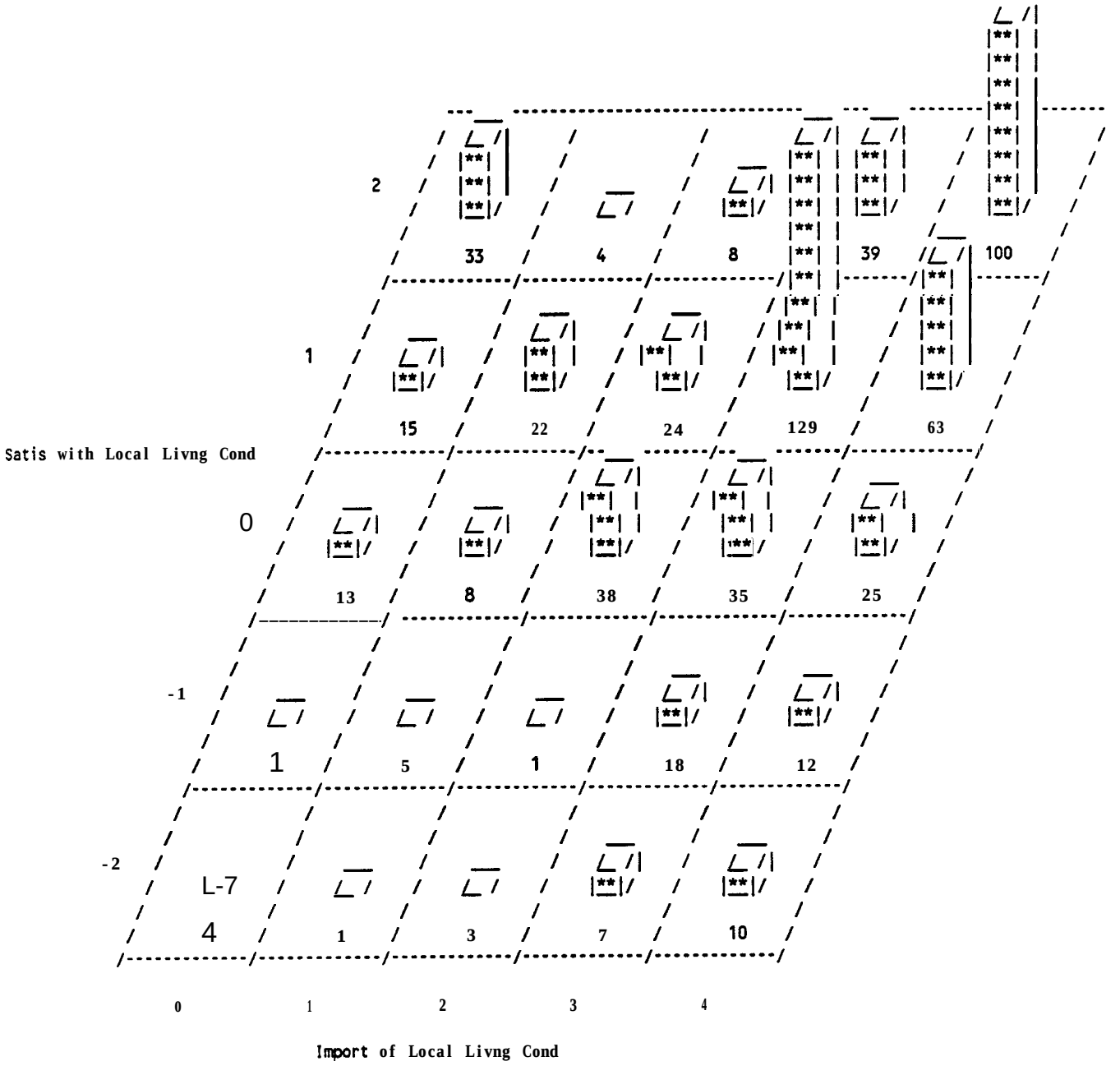
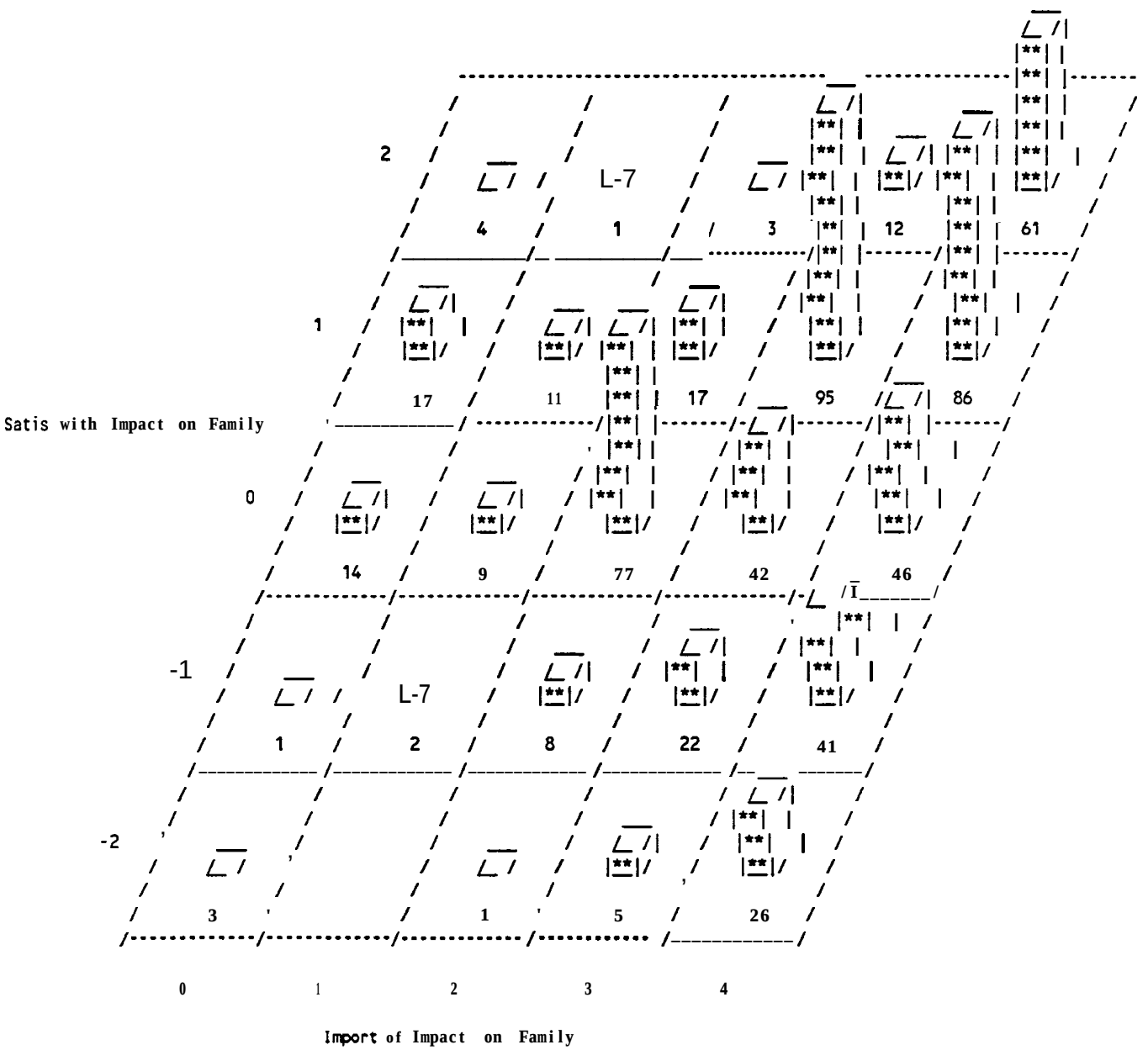


Chart 3.16: Relationship of Satisfaction to Importance

• * Impact on the Family • *

Frequency of IMPRT34 grouped by SATIS34



3.5 Summary of Findings on the 17 Dimensions

Table 3.6 summarizes the above findings on each of the 17 dimensions using the following three measures: how satisfied respondents were with each dimension; how important the dimension was to continued service in the IHS; and a composite rating that combines the first two measures. Specifically, we computed mean values of satisfaction and importance, as well as a mean composite rating, for individual dimensions by the six categories.

According to the results, aspects of IHS employment that are important to physicians include quality of care, relationships with the Native American community, levels and quality of administrative support, impact of the job on family life, and local living conditions. The least important aspects covered by the survey are housing benefits, the loan repayment program, and IHS physical facilities. The precise meaning of these aspects of employment was defined by the language of the questionnaire, which was brief and fairly general.

Considering both levels of satisfaction and importance, Table 3.6 indicates the following areas in which IHS receives positive composite responses:

- Quality of care provided;
- Relations with the Native American community; and
- Local living conditions.

The following areas earned negative ratings as shown in Table 3.6:

- Number of medical support staff;
- Finances, especially future IHS compensation; and
- Career development opportunities.

Administrative support staff were also a source of some dissatisfaction.

TABLE 3.6

Average Satisfaction and Importance Scores By Dimension

	Dimension	Mean Satisfaction Score -2 to +2*	Mean Importance Score 0 to 4*	Mean Composite Rating -8 to +8*
Quality/Adequacy of Care	Quality of Care	1.09	3.17	3.54
	Referral Services	0.42	2.49	1.03
Quality/Adequacy of Staff/Facilities	Administrative Support	0.00	**2.93**	-0.17
	Number of Medical support staff	-0.71	2.77	-2.17
	Quality of Medical support staff	0.55	2.91	1.59
	IHS Physical Facilities	-0.08	2.33	-0.28
	Patient Care Hours	0.78	2.60	1.94
Education/Career Opportunities	CME Opportunities	0.25	2.41	0.65
	Career Develop Opportunities	-0.15	2.48	-0.46
Finances	Annual II-IS Compensation	0.05	2.58	-0.41
	Future IHS Compensation	-0.04	2.68	-0.57.
	Loan Repayment Program	-0.09	2.11	-0.36
Living Conditions	Native American Relations	**0.99**	**2.84**	**3.03**
	Housing Benefits	-0.11	1.94	**-0.06**
	Local Living Conditions	0.86	2.76	2.47
Family Impact	Family Impact	0.40	**2.96**	1.26
	Spousal Job Opportunities	0.40	2.55	1.35

*Indicates the potential range for each measure.

3.6 Overall Satisfaction Measure

3.6.1 Introduction

Seventeen ratings are quite difficult to analyze as a group, particularly because the different ratings are not independent. A physician who is generally happy with his or her employment situation may well provide similar positive ratings on multiple dimensions. To summarize the overall level of a respondent's satisfaction with the II-IS, we developed an Index of Satisfaction. The index was constructed by weighting the respondent's rating for each of the seventeen dimensions by the average importance attached to each dimension. We then rescaled that weighted average so that an individual who rated the IHS with a +8 on each dimension could receive an overall Index of Satisfaction equal to 100. This technique also provides a lower bound of -100 for an individual who offered a -8 rating on each dimension. In fact, the Index of Satisfaction had a range between -64 and +80, with a mean value of 9.62. According to this measure, the majority of respondents were mildly satisfied. Approximately 25 percent had index values below -4.0, and another 25 percent had values greater than 24.6.

3.6.2 Satisfaction and Job Characteristics

Tables 3.7 and 3.8 report two formulas for constructing Indexes of Satisfaction. Our discussion focuses on the primary measure described above. The alternative measure is based on the individual satisfaction scores, not on the composite ratings.

Table 3.7 reports two overall satisfaction measures by the following seven categories of job characteristics: Primary Specialty; Type of Employee; Primary IHS Assignment; Percent of Time Spent in Non-Patient Care; Job Title; Total Annual Salary; and IHS Region. Both mean or average satisfaction values and standard deviations are reported.

According to data presented in this table, primary care physicians are generally more satisfied than those in non-primary care. Likewise, commissioned officers are more satisfied than Civil Service employees.

Within the primary IHS assignment category, general administrators are the most satisfied. In fact, the satisfaction index computed for this particular group of physicians -- approximately 18.43 -- was almost twice as high as the mean value reported for the overall survey respondent population. Moreover, general administrators received the highest mean value than any other group reported in this table.

Physicians who spend at least 50 percent of their time in non-patient care are generally more satisfied than physicians who allocate fewer hours to non-patient care. Similarly, medical directors or chiefs represent the most satisfied group of physicians in the job title category. The satisfaction indexes

computed for both respondent groups were more than one-and-one-half times as high as the average value reported for the overall respondent population.

For the total annual salary category, physicians in the $90,000 to $99,999 range are the most satisfied. Moreover, the satisfaction index computed for these physicians -- approximately 18.16 -- was almost twice as high as the mean value reported for overall respondents. Similarly, the satisfaction index computed for physicians earning $100,000 or more was almost two times the overall respondent average value. On the other hand, the satisfaction index for physicians earning less than $60,000 was half the mean value reported for overall respondents.

Among IHS regions with substantial numbers of physicians, Albuquerque and Portland were assigned satisfaction indexes of more than one-and-one-half times the overall respondent average value. On the other hand, physicians in the Navajo and Phoenix IHS regions are generally less satisfied -- as is apparent by satisfaction indexes of less than half the average value reported for the overall respondent population.

Table 3.7: Overall Satisfaction Measures,
by Job Characteristics of Respondants

	N	Overall Satisfaction Measure		Alternative Satisfaction Measure	
		Mean	Standard Deviation	Mean	Standard Deviation
All Respondents	649	9.621	21.85	14.40)	25.431
Primary Specialty					
Missing	9	3.081	20.891	5.011	26.11
Primary Care	457	10.491	21.891	15.51	25.021
Non-Primary Care	183	7.781	21.741	12.081	26.281
Type of Employee					
Civil Service	300	8.431	22.15	13.521	25.66
Ccmnissionad Corps	349	10.651	21.571	15.151	25.241
Primary IHS Assignment					
Missing	5	0.991	17.60	2.00	20.291
Ptnt Care Prvd	526)	9.14)	22.26)	13.801	25.851
Clinical Acbnin	91	11.691	20.07	16.301	23.611
General Admin	17	18.431	14.66	24.70	18.451
Other	10	5.471	25.961	17.541	29.12
Percent of Tim in Non-Patient Care					
[Missing	16	10.201	19.65	13.911	21.711
0	141	10.02	24.551	14.861	28.67
>0 and <25	363)	8.58)	21.28)	13.33)	24.501
>=25 and <50	581	7.941	21.701	11.85	26.061
>=50	71	15.411	19.061	21.161	22.961
Job Title					
Missing	41	10.981	20.081	15.111	24.921
Director/Chief	91	14.481	22.211	19.701	24.991
Medical Officer	339	7.73	22.011	12.851	25.781
Clinical Spity	138	9.82	22.31	13.181	25.161
Other	40	12.57	18.35)	18.96	23.881

(CONTINUED)

Table 3.7: **Overall** Satisfaction Measures,
by Job Characteristics of Respondents

		Overall Satisfaction Measure		Alternative Satisfaction Measure	
	N	Mean	Standard Deviation	Mean	Standard Deviation
Base Salary(annual)					
Missing	31	-2.24	21.62	1.31	27.17
<60,000	72	4.80	21.56	10.01	26.42
60,000 - 69,999	189	7.06	22.37	12.14	25.72
70,000 - 79,999	117	6.52	22.31	10.66	24.82
80,000 - 89,999	63	12.19	21.73	14.54	25.13
90,000 - 99,999	55	18.16	20.44	21.39	23.22
>=100,000	122	17.26	17.90	24.18	22.18
IHS Region					
Missing	41	10.98	20.08	15.11	24.92
Headquarters	43	10.51	17.56	15.87	20.90
Aberdean	51	9.71	24.16	14.13	28.73
Alaska	70	13.08	22.17	19.17	27.10
Albuquerque	45	16.35	21.45	24.29	24.85
Bemidji	20	9.32	25.27	14.05	26.45
Billings	44	13.08	23.94	20.75	27.07
California	8	6.61	24.74	6.12	25.41
Nashville	5	1.91	12.79	3.71	18.15
Navajo	138	4.89	19.38	9.01	22.18
Oklahoma	74	14.24	21.78	18.26	25.64
Phoenix	88	3.24	22.22	6.01	24.93
Portland	22	16.35	24.97	22.83	26.51

3.6.3 Satisfaction and Personal Characteristics

Table 3.8 reports two overall satisfaction measures by the following ten categories of personal characteristics: Gender; Ethnicity; Age; Marital Status; Age of Children; Graduate Medical School Type; Activities prior to IHS; Years of Experience in IHS; Board Certification in Primary Specialty; and Type of Community (in which the physician resided at 16 years of age). As in Table 3.7, both mean or average satisfaction values and standard deviations are presented.

According to data reported in Table 3.8, males are generally more satisfied than females, and white, non-Hispanic physicians are more satisfied than any single other ethnic group. As to ethnicity, however, black physicians are mildly dissatisfied with the IHS -- as is apparent by the negative mean value of approximately -0.44.

Physicians over 50 years of age had mean values of overall satisfaction almost twice as high as the mean value for the overall respondent population. Similarly, physicians between the ages of 41 and 50 received higher than average satisfaction indexes. On the other hand, survey respondents of less than 40 years of age received lower than average satisfaction indexes.

In terms of marital status, all groups of respondents are generally satisfied with the IHS. However, married physicians are more satisfied than the average survey respondent, while those who never married are less satisfied than the average respondent.

As discussed above in Section 2.4.2, the majority of IHS physicians do not have any children of pre-school age -- nor do they have any school-age children. According to Table 3.8, physicians without pre-school-age children are generally more satisfied than those with children. However, physicians without school-age children are generally less satisfied than those with children.

Within the school type category, international medical graduates (IMGs) are the most satisfied. The satisfaction index computed for this group of physicians -- approximately 23.32 -- was more than twice as high as the mean value reported for overall respondents. Moreover, IMGs received the highest mean value than any other group of personal characteristics reported in Table 3.8. On the other hand, physicians who received their medical education from strictly osteopathic institutions had the lowest mean value of overall satisfaction in this table.

Prior to joining the IHS, the majority of physicians were receiving their graduate medical education. This group of respondents, however, is generally less satisfied than those who were involved in some other activity prior to entering the IHS. In fact, physicians who were involved in clinical practice -- excluding practice for the government -- were more satisfied than others in this category.

In terms of the effect of years of experience on overall satisfaction with the IHS, physicians who have been practicing in the IHS for more than ten years are the most satisfied. Moreover, these physicians had satisfaction indexes of more than one-and-one-half times the overall respondent average value. This result makes sense -- if these physicians were dissatisfied, they would have left the IHS years ago. On the other hand, physicians with less than five years of experience in the IHS are generally less satisfied -- as is apparent by the below average satisfaction index reported in this table.

Physicians who are not board certified in their primary specialty are more satisfied than those who are certified. In terms of the final category of personal characteristics, all groups of respondents are generally satisfied with the IHS. However, physicians who resided in urban or rural communities at 16 years of age are more satisfied than the average survey respondent, while those who resided in suburban communities are less satisfied than the average respondent.

Table 3.8: Overall Satisfaction Measures, by Personal Characteristics of Respondents

	N	Overall Satisfaction Measure		Alternative Satisfaction Measure	
		Mean	Standard Deviation	Mean	Standard Deviation
All Respondents	649	9.621	21.85	14.40	25.431
Gender					
Missing	4	6.591	7.721	4.361	11.951
Male	471	IO.491	22.38)	15.81	25.981
Female	174	7.34	20.491	10.81	23.781
Ethnicity					
Missing	9	-0.541	16.66	-2.401	18.481
White, non-Hisp.	493	10.341	21.351	15.911	25.00
White Hispanic	29	0.55	23.501	4.021	32.94
Black	271	-0.441	23.50	2.62	26.931
Native American	431	4.641	20.141	6.891	20. 71
Other	48	19.791	22.441	21.621	23.581
Age					
Missing	10	2.251	18.571	2.75	22.501
<=30	54	6.831	17.021	12.741	19.611
31-40	323	5.861	22.321	9.74	24.981
41-50	159	12.77	20.391	17.96	25.221
>50	103	18.761	21.961	25.52	26.09
Marital Status					
Hissing	18	9.621	17.831	14,401	18.521
Married	491	10.57	22.521	15.491	25.841
Never Married	70	6.691	20.431	IO.931	23.251
Other	70	5.891	18.90	10.23	25.861
Pre-school Kids?					
No	436	10.88	21.661	16.09	25.531
Yes	213	7.061	22.071	10.93	24.93

(CONTINUED)

Table 3.8: Overall Satisfaction Measures, by Personal Characteristics of Respondents

	N	Overall Satisfaction Measure		Alternative Satisfaction Measure	
		Mean	Standard Deviation	Mean	Standard Deviation
School-age Kids?					
No	446	9.191	22.031	13.971	25.711
Yes	203	10.571	21.471	15.351	24.831
School Type					
Missing	13	-5.301	17.901	-5.161	19.791
Public	341	10.17	20.51	15.68	24.43
Private	204	8.65	21.65	13.80	25.67
Canadian	2	4.671	27.051	3.191	32.03
Other Foreign	41	23.321	23.991	25.741	24.811
Osteopathic	481	2.411	25.361	3.941	27.551
Activities Prior to IHS					
Missing	5	20.161	27.481	19.531	29.091
Grad Med Educ	414	a.821	21.321	13.511	24.101
Clinicl,Excl Gov	591	11.831	23.151	17.061	28.091
Other Clinical	112	10.301	24.791	14.841	29.551
Other	591	10.881	17.651	16.67	23.441
Years of Experience in IHS					
Years of Experience in IHS					
Missing	8	1.01	29.681	1.951	31.261
0-5 yrs	3961	6.211	22.441	10.861	25.921
6-10 yrs	106	14.19	20.311	18.37	23.651
>10 yrs	139	16.361	18.521	22.171	22.801
Board Certified in Primary Specialty?					
Missing	12	6.001	20.231	12.501	27.261
Yes	440	9.401	21.571	14.331	24.691
No	197	10.341	22.641	14.671	27.021

(CONTINUED)

Table 3.8: Overall Satisfaction Measures, by
Personal Characteristics of Respondents

		Overall Satisfaction Measure		Alternative Satisfaction Measure	
	N	Mean	Standard Deviation	Mean	Standard Deviation
Type of Community Uhen 16 Years Old					
Missing	14	5.771	26.591	8.461	31.69
Urban	180	10.721	22.45	15.19	26.651
[Suburban	231	8.441	22.531	12.391	25.221
Rural	224	10.201	20.361	16.211	24.171

3.7 Overall Satisfaction Measure and Response to Questions on Career Choice

Question 11 in the survey focused on whether respondents would choose medicine as a profession again, given their experiences in this field. According to the data reported in Table 3.9, the majority of physicians -- approximately 88 percent -- responded that they would choose the medical profession again. Overall satisfaction for this group of respondents is greater than the average value computed for the respondent population. On the other hand, physicians who responded negatively toward selecting this profession again were generally dissatisfied with the II-IS.

The survey also focused on whether respondents would choose to practice medicine in the IHS again, given their experiences in the service. As was the case above, the majority of physicians -- approximately 79 percent -- responded that they would choose to practice in the IHS again. Overall satisfaction for this group of respondents, however, was even greater. According to Table 3.9, physicians who responded positively to Question 12 had an overall satisfaction index of approximately 14.18. On the other hand, physicians who responded negatively toward selecting the IHS again are generally dissatisfied -- as is apparent by the negative mean value reported in the table. Moreover, this group of physicians responded more negatively than those who are simply dissatisfied with the medical profession.

Table 3.9: Overall Satisfaction Measure, by Response to Two Key Questions

	Overall Satisfaction Measure		
	N	Mean	Standard Deviation
All Respondents	649	9.621	21.851
(11)Would Choose Medicine Again?			
[Missing	16	3.321	18.901
Yes	570	11.071	21.46
No	63	-1.881	22.651
(12)Would Choose IHS Again?			
Missing	21	5.361	16.091
[Yes	515	14.181	19.501
No	113	-10.361	21.671

IV. PHYSICIAN SATISFACTION AND WILLINGNESS TO STAY IN THE IHS

Chapter 4 presents analyses of physician retention in the II-IS. The primary analyses use information on physicians' plans to leave the IHS and how those plans are affected by personal and job characteristics, as well as by satisfaction with different aspects of IHS employment. These analyses were conducted using descriptive statistics and multivariate statistical techniques. A second group of analyses were undertaken that separately examines IHS physicians who have service obligations, those who have completed a service obligation, and those who entered the IHS with no obligation at all.

This chapter is structured as follows:

- Section 4.1 presents physicians' plans to leave the IHS and their obligation status;
- Section 4.2 relates these variables to overall satisfaction;
- Section 4.3 investigates the effect of the 17 aspects of IHS employment;
- Section 4.4 discusses responses to the open-ended question; and
- Section 4.5 presents the multivariate statistical findings.

4.1 Alternative Measures of Willingness to Serve

As alternative measures of physician satisfaction and willingness to continue employment with the IHS, we defined two variables: Planners and Obligated Physicians. Analyses of these variables are discussed in greater detail below.

4.1.1 Planners

The variable Planners is defined by survey question 13 -- plans to leave IHS within the next five years. Tables 4.1 and 4.2 show numbers of survey respondents planning to leave the service within one and five years -- as well as those who do not plan to leave within the next five years -- by job and personal characteristics, respectively.

Table 4.1 reports that the majority of physicians by primary specialty and type of employee responded similarly to Question 13. Approximately 56 percent of both primary care and non-primary care physicians plan to leave within one and five years; and approximately 63 and 51 percent of Civil Service employees and commissioned officers, respectively, plan to leave during this period.

For the primary IHS assignment category, although the majority of patient care providers and clinical administrators plan to leave the service within one and five years, the majority of general

administrators -- almost 65 percent -- do not. This finding is consistent with overall satisfaction ratings. Table 3.7 indicates that general administrators are the most satisfied respondent group within the primary IHS assignment category.

Similarly, physicians who allocate at least 50 percent of their time to non-patient care are generally more satisfied than physicians who spend fewer hours in non-patient care, according to Table 3.7. This result is supported by the data reported in Table 4.1. The majority of physicians who spend at least 50 percent of their time in non-patient care -- approximately 54 percent -- do not plan to leave the IHS within the next five years.

In the job title category, the majority of medical directors or chiefs and clinical specialists, do not plan to leave the IHS within the next five years. However, the majority of medical officers -- over 64 percent -- do plan to leave the service.

In terms of total annual salary, high earnings are associated with longer planned tenure. Approximately 57 and 65 percent of physicians in the $80,000 to $89,999 range and in the $90,000 to $99,999 range, respectively, do not plan to leave the IHS within the next five years. Again, this finding is not surprising, particularly for physicians with salaries between $90,000 and $99,999, who are reportedly the most satisfied group within the total annual salary category. On the other hand, more than three quarters of the physicians with salaries of less than $60,000 plan to leave the service within one and five years. Table 3.7 reinforces this result -- physicians in this range received the lowest mean value for overall satisfaction. Of course, salary may not affect employment plans when rank and other factors are held constant. The multivariate results discussed in Section 4.5 indicate that current salary by itself plays little role in determining plans to leave the IHS.

The final category of job characteristics shows some differences among physicians in the twelve IHS regions regarding when the majority plan to leave the service. The majority of physicians in Navajo and Phoenix -- the two most populated regions -- plan to leave the IHS within one and five years. On the other hand, the majority of survey respondents in Oklahoma and Alaska -- the third and fourth most populated regions, respectively -- do not plan to leave within the next five years.

In terms of the categories of personal characteristics presented in Table 4.2, the majority of survey respondents by gender and racial or ethnic group plan to leave the IHS within one and five years. For the age category, the majority of surveyed physicians -- except those between 41 and 50 years of age -- responded that they plan to leave the service within one and five years. Approximately 61 percent of the respondents between the ages of 41 and 50 reported no future plans to leave the service.

Table 4.2 did not report any substantial differences b physicians. The majority of respondents in both groups -- approximately 55 and 67 percent, respectively -- reported plans to leave the IHS within one and five years. Similarly, there were no real differences between physicians with children of pre-school age and those without. The majority in both groups -- approximately 54 and 61 percent, respectively -- plan to leave the II-IS during these years. On the other hand, the majority of physicians without school-age children -- almost 63 percent -- plan to leave the service within one and five years, while the majority of physicians with children -- almost 59 percent -- do not.

By school type, only international medical graduates (IMGs) had respondent majorities reporting no future plans to leave the service. This result is supported by data on overall satisfaction. According to Table 3.8, IMGs are the most satisfied group of respondents within the school type category.

In terms of activities prior to entering the IHS, the majority of physicians in the following two respondent groups plan to leave the service within one and five years: graduate medical education and other clinical. Similarly, the majority of physicians with less than five years of experience -- approximately 64 percent -- have plans to leave the service during these years. On the other hand, the majority of physicians involved in clinical practice -- excluding practice for the government -- prior to entering the IHS and employed for more than five years in the IHS have no future plans to leave.

All groups of survey respondents within the board certification category, as well as within the type of community category, reacted similarly to Question 13. In both categories, the majority of respondents reported plans to leave the service within one and five years.

Table 4.1: Plans to Leave the IHS,
by Job Characteristics of Respondents

		Plan to Leave the IHS					
	Total	Missing	Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
	N / % of Col Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total
All Respondents	649 / 100.00~	6.321	15.72	14.641	9.091	IO.481	43.76
Primsry Specialty							
Missing	9 / 1.39		33.331	22.221	11.11~	11.11~	22.22
Primary Care	457 / 70.42)	6.781	14.221	14.88	9.631	10.50~	43.98
Non-Primary Care	183 / 28.201	5.46	18.581	13.661	7.65	IO.381	44.26
Type of Employee							
Civil Service	300 / 46.22	6.331	19.671	17.67	9.671	9.331	37.33
Commissioned Corps	349 / 53.781	6.301	12.321	12.031	8.60	II.461	49.28
Primary IRS Assignment							
[Missing	5 / 0.771		60.001				40.00
Ptnt Care Prvd	526 / 81.051	6.651	16.351	15.21	8.941	10.27	42.591
Clinical Admin	911 / 14.02	5.49	10.99	14.29	10.99	10.99	47.25
[General Admin	171 / 2.621	5.881		5.88		23.531	64.71
Other	10 / 1.54		30.001	10.00	20.00		40.001
Percent of Time in Non-Patient Care							
Missing	16 / 2.47	50.00~	18.751	6.251	6.251		18.75
0	141 / 21.731	7.80	20.571	13.481	5.671	9.221	43.261
>0 and <25	363 / 55.931	4.681	15.15	16.251	9.641	10.741	43.531
>=25 and <50	58 / 8.941	1.72	13.791	15.52	17.241	IO.341	41.381
>=50	7' / 10.94)	5.63	9.86)	9.861	7.041	14.081	53.521

Table 4.1: Plans to Leave the IHS,
by Job Characteristics of Respondents

		Plan to Leave the IHS					
	Total	Missing	Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
	N / % of Col Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total
Job Title							
Missing	41 / 6.32	12.20	17.07	4.88	9.76	12.20	43.90
Director/Chief	91 / 14.02	4.40	8.79	13.19	8.79	14.29	50.55
Medical Officer	339 / 52.23	7.08	19.76	17.99	10.32	8.85	35.99
Clinical Splty	138 / 21.26	3.62	11.59	13.77	6.52	11.59	52.90
Other	40 / 6.16	7.50	10.00	2.50	7.50	10.00	62.50
Base Salary(annual)							
Missing	31 / 4.78	9.68	41.94	3.23	3.23	3.23	38.71
<60,000	72 / 11.09	4.17	20.83	23.61	9.72	19.44	22.22
60,000 - 69,999	189 / 29.12	7.94	19.05	17.99	11.11	5.82	38.10
70,000 - 79,999	117 / 18.03	6.84	23.08	15.38	7.69	8.55	38.46
80,000 - 89,999	63 / 9.71	7.94	7.94	14.29	7.94	4.76	57.14
90,000 - 99,999	55 / 8.47	5.45	1.82	7.27	12.73	7.27	65.45
>=100,000	122 / 18.80	3.28	4.10	9.84	7.38	20.49	54.92

Table 4.1: Plans to leave the IHS,
by Job Characteristics of Respondents

		Total	Plan to Leave the IHS					
			Missing	Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
	N	% of Cot Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total
IHS Region								
Missing	41	6.32)	12.20)	17.07)	4.88)	9.761	12.201	43.901
Headquarters	43	6.631	6.981	18.60	9.30	9.301	II.631	44.19
Aberdean	51	7.861	II.761	II.761	11.76)	7.84	3.921	52.941
Alaska	70	10.79	2.861	14.291	12.861	2.861	15.71)	51.431
Albuquerque	45	6.931	6.671	8.89	8.891	4.441	8.89	62.22
Bemidji	201	3.081	5.001	20.00	10.00	10.00	10.00	45.001
Billings	441	6.781	2.271	18.18	20.451	6.821	13.64	38.64
California	8	1.23		25.00	12.501	12.501		50.00
Nashville	5	0.77	20.001		20.00	20.001		40.00
Navajo	138	21.261	6.521	18.84	21.011	15.941	9.421	28.26
Oklahoma	74	11.40	4.051	IO.811	10.81	8.11	6,761	59.461
Phoenix	88	13.56	6.821	18.18	20.451	7.95	14.77	31.82
Portland	22	3.391	4.55	9.09	9.09	9.091	9.09	59.091

Table 4.2: Plans to Leave the IHS,
by Personal Characteristics of Respondents

	Total		Plan to Leave the IHS					
			Missing	Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
	N	% of Cot Total	% of Row Total	% of Row Total	% of Row Total	% of Rou Total	% of Row Total	% of Rou Total
All Respondents	649	100.00	6.321	15.721	14.64	9.09	10.481	43.761
/Gender								
Missing	4	0.621	25.001	25.001				50.00
Male	471	72.571	5.731	14.651	14.651	7.861	11.251	45.861
Female	174	26.811	7.471	18.391	14.941	12.641	8.62)	37.931
Ethnicity								
Missing	9	1.391	11.11	44.441	11.111			33.331
White, non-Hisp.	493	75.96	5.681	14.601	15.621	9.531	10.551	44.021
White Hispanic	291	4.471	10.341	31.031	10.341	10.341	3.451	34.481
Black	271	4.161		29.631	18.521	14.811	7.411	29.631
[Native American	431	6.631	13.951	6.981	13.951		18.60)	46.511
Other	481	7.401	6.251	12.501	6.251	10.421	10.42	54.171
Age								
Missing	10	1.541	10.00	30.001	10.00		10.001	40.001
<=30	54	8.321	5.561	31.481	25.931	11.111	9.26)	16.671
31-40	323	49.771	5.571	18.581	16.721	10.531	8.051	40.561
41-50	159	24.501	4.401	6.921	8.811	6.291	12.581	61.011
>50	103	15.871	11.651	10.681	11.651	8.741	15.53	41.751
Marital Status								
Missing	18	2.77	5.56	16.67	22.22	5.56	11.11	38.89
Married	491	75.65	6.11	14.66	14.26	9.16	11.20	44.60
Never Married	701	10.791	5.711	25.711	17.141	7.141	11.431	32.861
Other	701	10.791	8.571	12.861	12.861	11.431	4.291	50.001

(CONTINUED)

Table 4.2: Plans to Leave the IHS,
by Personal Characteristics of Respondents

		Plan to Leave the IHS					
	Total	Missing	Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
	N / % of Cot Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total
Pre-school Kids?							
No	436 / 67.181	6.881	14.451	12.391	8.721	11.241	46.33
Yes	213 / 32.821	5.16	18.311	19.251	9.861	8.92	38.50
[School-age Kids?							
No	446 / 68.721	6.951	17.491	16.821	11.211	10.54	37.001
Yes	203 / 31.28	4.931	11.821	9.851	4.431	10.34	58.621
School Type							
Missing	13 / 2.00)	7.691	30.77	7.69)	15.38)	7.69)	30.771
Public	341 / 52.54	6.741	12.90)	13.491	9.681	12.021	45.161
Private	204 / 31.43)	5.391	20.10~	18.631	7.35)	9.311	39.221
Canadian	2 / 0.31			50.00~			50.00
Other Foreign	41 / 6.32	9.761	4.881	4.881	12.201	12.201	56.101
Osteopathic 481	7.40	4.17	22.921	16.671	6.251	4.171	45.831
[Activities Prior to IHS							
Missing	5 / 0.771		20.00	20.00		20.00	40.001
Grad Med Educ	414 / 63.791	6.281	16.431	16.431	9.181	11.351	40.341
Clinicl,Excl Gov	59 / 9.09	6.781	15.25	8.47	5.08	13.56	50.851
Other Clinical	112) 17.26)	6.251	16.07)	11.61)	8.93)	8.93)	48.21)
Other	591 / 9.091	5.081	10.171	15.251	13.561	3.391	52.541
Years of Experience in IHS							
Missing	8 / 1.23	12.501	37.50)		12.50		37.501
0-5 yrs	396 / 61.021	6.57	21.461	17.171	10.861	10.351	33.591
6-10 yrs	106 / 16.331	5.661	5.661	14.15	4.721	3.77	66.041
>10 yrs	139 / 21.42	5.761	5.761	7.911	7.911	16.551	56.121

(CONTINUED)

Table 4.2: Plans to Leave the IHS,
by Personal Characteristics of Respondents

	Total		Plan to Leave the IHS					
			Missing	Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
	N	% of Cot Total	% of Row Total	% of Row Total	% of Row Total	% of Rou Total	% of Ron Total	% of Rou Total
Board Certified in Primary Specialty?								
Missing	12	1.85		33.331	8.331	8.331	8.331	41.671
Yes	440	67.801	7.051	14.771	15.00	10.00	10.00	43.181
No	197	30.351	5.081	16.751	14.211	7.111	11.681	45.181
Type of Community When 16 Years Old								
Missing	14	2.16	14.29	21.43	14.29		21.43	28.57
Urban	180	27.73	6.67	17.78	13.33	8.89	7.78	45.56
Suburban	231	35.59	7.36	14.72	13.85	12.12	10.39	41.56
Rural	224	34.51	4.46	14.73	16.52	6.70	12.05	45.54

4.1.2 Obligated Physicians

The variable Obligated Physicians is defined by survey respondents who at one time or another had service obligations with the IHS. Two subpopulations are distinguished: those who have current obligations with the IHS; and those who have expired obligations and are continuing employment in the IHS. The latter subpopulation category is assigned the variable Stayers. Tables 4.3 and 4.4 display numbers, of survey respondents within each subpopulation category -- as well as numbers of respondents who have unknown obligation end dates or no obligation history with the IHS -- by job and personal characteristics, respectively.

The majority of survey respondents -- approximately 61 percent -- did not have service obligations that could be fulfilled through employment in the IHS. Moreover, almost 16 percent have current service obligations, and 22 percent have expired service obligations, In terms of the categories of job characteristics presented in Table 4.3, the majority of physicians by primary specialty, primary IHS assignment, and percent of time in non-patient care responded similarly. However, within the primary IHS assignment category, none of the general administrators reported current service obligations. In addition, clinical administrators are more than three times as likely to have expired service obligations than current obligations. Likewise, physicians who spend at least 50 percent of their time in non-patient care are more than six times as likely to have expired than current service obligations.

Within the type of employee category, differences exist between Civil Service and Commissioned Corps physicians. Almost 74 percent of Civil Service employees and 49 percent of commissioned officers have no history of IHS obligations. Similarly, differences exist within the job title category. The majority of medical directors or chiefs and medical officers -- approximately 59 and 73 percent, respectively -- have no obligation history with the IHS. On the other hand, less than 44 percent of clinical specialists and exactly 40 percent of physicians with "Other" job titles have no obligation history. Moreover, both medical directors or chiefs and physicians with "Other" job titles are more than three times as likely to have expired service obligations than current obligations.

By total annual salary, the majority of physicians -- except those in the $80,000 to $89,999 range -- never had service obligations with the IHS. In addition, physicians earning less than $70,000 are at least two times as likely to have current service obligations than expired obligations. On the other hand, physicians earning at least $70,000 are more likely to have expired than current service obligations.

Within heavily populated IHS regions, the majority of physicians have no obligation history with the IHS. Moreover, physicians practicing in Aberdeen -- the fifth most populated region -- are more than three times as likely to have current service obligations than expired obligations. On the other hand,

physicians practicing in Alaska -- the fourth most populated region -- are almost four times as likely to have expired than current service obligations.

In terms of the categories of personal characteristics presented in Table 4.4, the majority of survey respondents in the following categories never had service obligations with the IHS: Gender; Marital Status; School Type; Activities prior to IHS; Board Certification in Primary Specialty; and Type of Community (in which the physician resided at 16 years of age). Moreover, physicians who were involved in other clinical activities prior to entering the IHS are more than twice as likely to have current service obligations than expired obligations.

By ethnicity, the majority of white physicians -- both Hispanic and non-Hispanic -- never had service obligations with the II-IS. On the other hand, the majority of black physicians -- approximately 56 percent -- have current service obligations. Among Native Americans, approximately 44 percent have current service obligations, 21 percent have expired obligations, and 33 percent have never had service obligations with the IHS.

By age category, the majority of physicians -- except those between 31 and 40 years of age -- never had service obligations with the IHS. Only 47 percent of survey respondents between the ages of 31 and 40 reported no IHS obligation history. In addition, physicians between the ages of 41 and 50 are more than twice as likely to have expired service obligations than current obligations. No physician under 30 years of age has an expired obligation, and none over 50 years of age has a current obligation.

The majority of IHS physicians without children of pre-school age -- approximately 66 percent -- have no history of IHS obligations. In addition, less than 50 percent of physicians with children of pre-school age reported no obligation history with the II-IS. On the other hand, the majority of survey respondents both with and without school-age children have no obligation history. Moreover, physicians with school-age children are more than twice as likely to have expired service obligations than current obligations.

In terms of years of experience in the IHS, the majority of respondents -- except those who have been employed between six and ten years -- reported no obligation history with the IHS. The majority of physicians who have between six and ten years of experience in the IHS -- approximately 53 percent -- have expired service obligations. In addition, physicians who have at most five years of experience in the IHS are almost twice as likely to have current service obligations than expired obligations. On the other hand, very few physicians with six or more years of experience have current obligations.

Table 4.3: Status of Service Obligation,
by Jab Characteristics of Respondents

		Status of Service Obligation					
	Total	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing	
	N	% of Cot Total	% of Row Total	% of Row Total	% of Row Total	% of Ron Total	% of Row Total
All Respondents	649	100.00~	15.72	22.19	0.77	60.551	0.771
Primsry Specialty							
Missing	9	1.39	33.331			44.441	22.221
Primary Care	457	70.421	14.221	22.321	0.88	62.141	0.44
Non-Primary Care	183	28.201	18.581	22.95)	0.551	57.381	0.551
Type of Employee							
Civil Service	300	46.221	13.671	11.671	0.33	73.671	0.67
Commissioned Corps	349	53.781	17.48	31.231	1.151	49.281	0.861
Primary IHS Assignment							
Missing	5	0.771	20.001			60.00	20.00
Ptnt Care Prvd	526	81.051	17.301	20.34	0.761	60.841	0.761
Clinical Admin	91	14.021	8.791	32.971		58.24	
General Admin	17	2.621		29.411		70.59	
Other	10	1.54)	20.00	20.001	10.00	50.00	
[Percent of Time in Non-Patient Care							
Missing	16	2.471	18.75	12.501		62.501	6.25
0	141	21.731	12.06	15.60	0.711	70.211	1.42)
>0 and <25	363	55.931	19.01	22.311	1.10	57.021	0.551
>=25 and <50	58	8.941	15.521	24.141		60.341	
>=50	71	10.941	5.63	35.211		59.151	

Table 4.3: Status of Service Obligation,
by Jab Characteristics of Respondents

	Total		Status of Service Obligation				
			Obligation: End Date in Future	Obligation: End Date in Put	Obligation: End Date Unknown	No Obligation	Missing
	N	% of Col Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total
Job Title							
Missing	41	6.32	14.631	41.461	2.441	41.461	
Director/Chief	91	14.02	8.791	31.871		59.341	
Medical Officer	339	52.231	14.45	12.09	0.291	72.571	0.59
Clinical Spity	138	21.261	24.641	29.711	0.72	43.48	1.451
Other	401	6.161	12.501	40.001	5.001	40.001	2.50
Base Salary(annual)							
Missing	31	4.78	22.58	38.71	6.45	32.26	
<60,000	72	11.09	31.94	1.39	1.39	65.28	
60,000 - 69,999	189	29.12	19.05	9.52		69.84	1.59
70,000 - 79,999	117	18.03	20.51	22.22	0.85	56.41	
80,000 - 89,999	63	9.71	14.29	41.27		42.86	1.59
90,000 - 99,999	55	8.47	1.82	41.82	1.82	54.55	
>=100,000	122	18.80	1.64	31.15		66.39	0.82

Table 4.3: Status of Service Obligation,
by Job Characteristics of Respondents

		Status of Service Obligation				
	Total	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
	N	% of Cot Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total
IHS Region							
Missing	41	6.32)	14.63	41.46)	2.441	41.46	
Headquarters	43	6.631	13.951	37.211	2.331	44.19	2.331
Aberdean	51	7.86	13.731	3.92		82.35	
Alaska	70	10.791	7.14	27.14)	1.43)	62.861	1.43
Albuquerque	451	6.931	13.33	28.891		55.561	2.221
Bemidji	20	3.08	25.001	35.00	5.00	35.001	
Billings	44	6.781	22.73	25.001		52.271	
California	8	1.231	25.001	37.50		37.501	
[Nashville	5	0.771	40.001	20.001		40.001	
Navajo	138			16.67	0.72	67.39	
Oklahoma		11.40		12.16		71.62	
Phoenix	88						
[Portland	221	3.391	13.641	31.821		54.551	

Chart 3.17: Relationship of Satisfaction to Importance
**** Job Opportunities for Spouse • ***

Frequency of IMPRT31 grouped by SATIS31

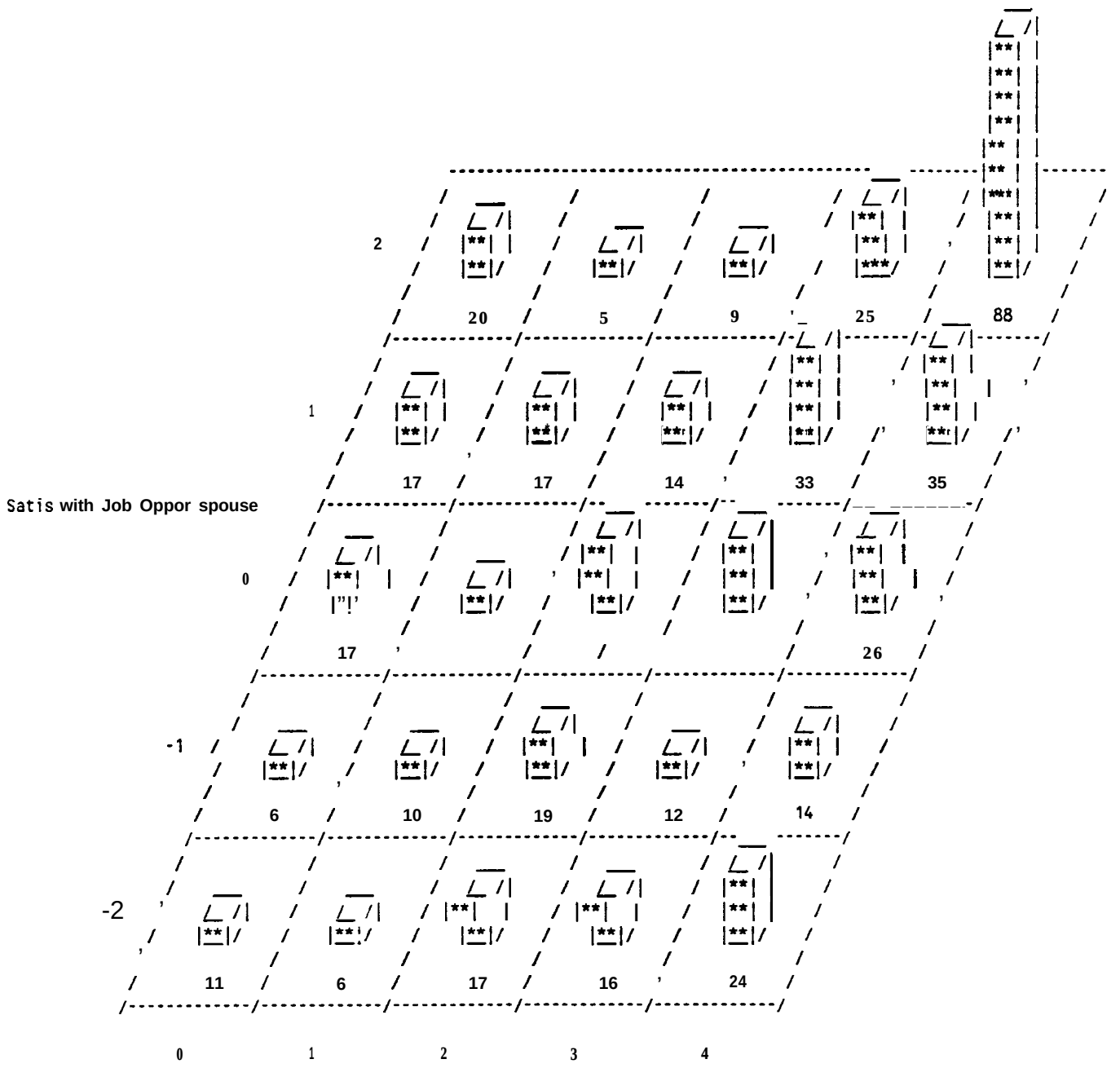


Table 4.4: Status of Service Obligation,
by Personal Characteristics of Respondents

		Status of Service Obligation				
	Total	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
	N / % of Cot Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total
All Respondents	649 / 100.00	15.72	22.19	0.77	60.55	0.77
[Gender						
Missing	4 / 0.62			25.00	50.00	25.00
Male	471 / 72.57	12.74	23.14	0.42	63.27	0.42
Female	174 / 26.81	24.14	20.11	1.15	53.45	1.15
Ethnicity						
Missing	9 / 1.39)			11.11)	77.78	11.11~
White, non-lisp.	493 / 75.96	11.56	23.33	0.61	63.69	0.81
White Hispanic	291 / 4.47	20.69	20.69		58.62	
Black	271 / 4.16	55.56	18.52		25.93	
Native American	431 / 6.63	44.19	20.93	2.33	32.56	
Other	48 / 7.40	10.42	18.75		70.83	
Age						
Missing	10 / 1.54	10.00		10.00	70.00	10.00
<=30	541 / 8.32	18.52		1.85	77.78	1.85
31-40	323 / 49.77	23.53	28.17	0.93	47.06	0.31
41-50	159 / 24.50	9.43	23.90		66.04	0.63
>50	103 / 15.87		14.56		84.47	0.97
Marital Status						
Missing	18 / 2.77	22.22	5.56		61.11	11.11
[Married	491 / 7'5.65	14.05	23.01	0.81	61.71	0.41
Never Married	70 / IO.79	22.86	20.00	1.43	55.71	
Other	70 / 10.79	18.57	22.86		57.14	1.43

(CONTINUED)

Table 4.4: Status of Service Obligation,
by Personal Characteristics of Respondents

		Status of Service Obligation					
		Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing	
	Total						
	N	% of Cot Total	% of Row Total	% of Rou Total	% of Row Total	% of Rou Total	% of Row Total
Pre-school Kids?							
No	436	67.181	14.681	17.661	0.691	65.831	1.151
Yes	213	32.821	17.841	31.461	0.941	49.771	
School-age Kids?							
No	446	68.721	16.821	17.941	0.901	63.681	0.671
Yes	203	31.281	13.301	31.531	0.491	53.691	0.991
School Type							
Missing	131	2.001	7.691	23.081	7.691	53.851	7.691
Public	341	52.541	14.961	24.341	0.88	59.531	0.291
Private	204	31.431	18.631	24.511	0.491	55.391	0.98
[Canadian	2	0.311				100.00~	
Other Foreign	411	6.321	2.441			97.561	
Osteopathic	481	7.401	22.921	16.67		58.331	2.081
Activities Prior to IHS							
Missing	5	0.771		20.001		20.00	60.001
/Grad Med Educ	414	63.791	18.84	29.471	0.721	50.72	0.241
Clinicl,Excl Gov	591	9.09	10.171	13.561		76.271	
Other Clinical	112	17.261	13.391	6.251		79.461	0.891
Other	591	9.09	5.081	10.171	3.391	81.361	
Years of Experience in IHS							
Missing	8	1.231				62.501	37.50
0-5 yrs	396	61.021	23.991	12.121	0.76	62.881	0.251
6-10 yrs	106	16.331	4.72	52.831	0.941	41.511	
>10 yrs	139	21.42)	1.44	28.781	0.72)	68.351	0.721

(CONTINUED)

Table 4.4: Status of Service Obligation,
by Personal Characteristics of Respondents

		Status of Service Obligation				
	Total	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknoun	No Obligation	Missing
	N	% of Col Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total	% of Row Total
Board Certified in Primary Specialty?							
Missing	12	1.851	8.331	25.001		58.331	8.331
Yes	440	67.80	14.09	24.771	0.68	59.551	0.911
No	197	30.35)	19.80)	16.24)	1.021	62.94)	
Type of Community When 16 Years Old							
Missing	141	2.161	7.141	21.431		64.29	7.141
Urban	180	27.73	13.891	22.221		63.331	0.561
Suburban	231	35.591	16.451	22.941	0.871	58.871	0.871
Rural	224	34.51	16.96	21.431	1.34	59.82	0.45)

4.2 Overall Satisfaction

In Section 3.5, we discussed the overall level of a respondent's satisfaction with the IHS by seven different categories of job characteristics and ten different categories of personal characteristics. Below, we further analyze these mean values of overall satisfaction by the categories of Planners and Obligated Physicians defined above.

4.2.1 Planners

Tables 4.5 and 4.6 report mean values of overall satisfaction and standard deviations for survey respondents planning to leave the service within one and five years -- as well as those who do not plan to leave within the next five years -- by job and personal characteristics, respectively. The first two or three pages of these tables present the mean values of overall satisfaction, and the pages that follow contain the standard deviations. According to these tables, overall satisfaction increases with the number of years physicians plan to stay in the IHS. Among all survey respondents, satisfaction indexes ranged between a lower bound of -10.24 for those planning to leave the IHS within one year and an upper bound of 18.29 for those planning to stay beyond five years.

Within the type of employee category presented in Table 4.5, overall satisfaction for both Civil Service and Commissioned Corps employees increases with physician "planned length of stay." By primary specialty, however, this pattern only holds true for primary care providers. Among non-primary care providers, satisfaction indexes decreased from 3.74 for those planning to leave within two years to -1.89 for those planning to leave within three years.

Similarly, by primary IHS assignment overall satisfaction increases with physician planned length of stay only for patient care providers, clinical administrators, and "Others." Among general administrators, a satisfaction index of 19.83 was computed for those planning to leave the IHS within five years, but an index of **17.80 was computed** for those planning to stay beyond five years.

In terms of percent of time spent in non-patient care and total annual salary, overall satisfaction generally does not increase with physician planned length of stay. Within the former category, this pattern is particularly noticeable for physicians who spend between 25 and 50 percent of their time in non-patient care. These respondents have mean values of satisfaction that substantially dropped from 10.07 for those planning to leave within two years to 1.69 for those planning to leave within three years. Within the latter category, this pattern is particularly noticeable for physicians who earn between $80,000 and $89,999 annually. These respondents have mean values of satisfaction that substantially decreased

from 1.22 for those planning to leave within three years to -15.03 for those planning to leave within five years.

By job title, the above pattern holds true only for physicians with "Other" job titles. These respondents have mean values of satisfaction that decreased to 0.00 for those planning to leave within two years, substantially increased to 22.96 for those planning to leave within three years, and then steadily decreased for the remaining two categories of Planners. On the other hand, overall satisfaction increases with physician planned length of stay for medical directors or chiefs, medical officers, and clinical specialists.

Among the heavily populated IHS regions, differences in satisfaction index patterns exist. In Navajo -- the most populated IHS region -- and Aberdeen -- the fifth most populated region -- overall satisfaction increases with physician planned length of stay. However, in Phoenix, Oklahoma, and Alaska -- the second, third, and fourth most populated regions, respectively -- overall satisfaction does not increase with planned length of stay. In the Alaska region, for example, mean values of satisfaction steadily increased to 27.69 for those planning to leave the IHS within five years and then substantially dropped to 15.24 for those planning to stay beyond five years.

As with the categories of job characteristics discussed above, differences in satisfaction index patterns exist among the ten categories of personal characteristics presented in Table 4.6. Within the following categories, overall satisfaction generally increases with physician planned length of stay: Gender; Age of Children; and Board Certification in Primary Specialty. Within the remaining seven categories, however, this pattern does not hold true for all respondent groups.

By ethnicity, overall satisfaction increases with physician planned length of stay only for white, non-Hispanic survey respondents. White, Hispanic respondents have mean values of satisfaction that increased to -0.27 for those planning to leave the IHS within two years and then substantially decreased to -14.31 for those planning to leave within three years. Likewise, both black and Native American respondents have mean values of satisfaction that steadily increased for the first four categories of Planners and then decreased for those planning to stay beyond five years. Moreover, a negative mean value of satisfaction was computed for all black respondents, regardless of their employment plans with the IHS. As mentioned above in Section 3.5.3, black physicians represented the only dissatisfied group of respondents by personal characteristics.

For married physicians over the age of 30, overall satisfaction increases with physician planned length of stay. On the other hand, surveyed physicians who have never married and are 30 years of age

or younger have mean values of satisfaction that steadily increased for the first four categories of Planners and then dropped for those planning to stay beyond five years.

By school type, overall satisfaction increases with physician planned length of stay only for survey respondents who received their graduate medical education from private and Canadian institutions. Both international medical graduates (IMGs) and graduates of public institutions have mean values of satisfaction that steadily increased for the first four categories of Planners and then decreased for those planning to stay beyond five years. Similarly, graduates of osteopathic institutions have mean values of satisfaction that steadily increased for the first three categories of Planners to 22.37 and then substantially decreased to 4.93 for those planning to leave the IHS within five years.

Among survey respondents who were receiving their graduate medical education prior to entering the service, overall satisfaction increases with physician planned length of stay. This pattern does not hold true for respondents who were involved in clinical or "Other" activities. Similarly, physicians with more than five years of experience in the IHS have mean values of satisfaction that do not increase with planned length of stay.

For the final category of personal characteristics -- type of community -- overall satisfaction increases with physician planned length of stay only for survey respondents who resided in either suburban or rural areas at 16 years of age. Respondents who lived in urban communities have mean values of satisfaction that steadily increased for the first four categories of Planners to 23.22 and then dropped to 19.38 for those planning to stay beyond five years.

Table 4.5: Overall Satisfaction Measure, by Plans to Leave the IHS and Job Characteristics of Respondents

** Mean * *

	All Respondents	Missing	Plan to Leave the IHS: Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
All Respondents	9.62	11.481	-10.241	1.54	5.80	16.721	18.291
Primsry Specialty							
Missing	3.081		-10.321	-4.69	31.041	38.191	-0.571
Primary Care	10.49	10.621	-9.14	0.91	7.64	16.35	19.281
Non-Primary Care	7.78	14.131	-12.341	3.741	-1.801	16.531	16.291
Type of Employee							
Civil Service	8.43	9.581	-10.831	4.411	4.64	16.14	19.341
Commissioned Corps	10.651	13.111	-9.44	-2.091	6.911	17.121	17.611
Primsry IHS Assignment							
Missing	0.99		-10.321				17.961
Ptnt Care Prvd	9.141	10.46	-10.311	2.09	4.861	16.271	18.11
Clinical Admin	11.691	15.521	-7.771	-1.90	10.22	17.891	18.781
General Admin	18.431	26.651		11.581		19.831	17.801
Other	5.47)		-16.33)	-7.471	5.72		24.92
Percent of Time in Non-Patient Care							
Missing	10.201	12.391	-10.78	11.58)	31.04		17.961
0	10.02	11.241	-12.88	7.501	9.021	11.871	21.221
>0 and <25	8.58)	9.86)	-11.371	-0.791	5.66)	17.881	17.24
>=25 and <50	7.941	38.531	-9.051	10.071	1.691	16.51	12.00
>=50	15.411	10.401	8.431	-7.36	4.771	18.621	21.971
Job Title							
Missing	10.981	17.17)	-8.18)	5.81)	9.42)	19.631	15.22)
(Director/Chief	14.481	13.341	-2.261	-1.96	2.581	16.901	23.161
Medical Officer	7.731	10.351	-10.931	4.071	5.77)	15.261	18.01
Clinical Splty	9.821	6.661	-15.711	-4.74	1.42	17.731	18.72
Other	12.57	16.541	3.62)	0.00	22.96	19.401	11.69)

(CONTINUED)

Table 4.5: Overall Satisfaction Measure, by Plans to Leave the IHS and Job Characteristics of Respondents

** Mean **

	All Respondents	Plan to Leave the IHS					
		Missing	Uithin 1 Year	Yithin 2 Years	Uithin 3 Years	Yithin 5 Years	Not Uithin 5 Years
[Base Salary(annual)							
Missing	-2.241	8.99	-15.531	15.671	35.61)	2.88	4.281
<60,000	4.801	12.061	-12.151	0.98	10.79	15.51	11.40)
60,000 - 69,999	7.061	6.651	-11.211	3.681	1.911	16.361	17.95
70,000 - 79,999	6.521	12.681	-10.321	-1.801	8.93	13.811	16.771
80,000 - 89,999	12.191	19.68	-4.26	-7.111	1.22	-15.03	22.041
90,000 - 99,999	18.161	7.98	-21.161	8.671	3.17)	15.031	24.421
>=100,000	17.261	20.951	12.801	4.21	9.101	23.351	18.53
IHS Region							
Missing	10.981	17.171	-8.181	5.811	9.421	19.631	15.22
Headquarters	10.511	14.731	5.251	2.571	16.41	20.51~	9.85
Aberdean	9.711	16.961	-19.771	-5.501	5.471	16.031	18.20
Alaska	13.081	16.461	-0.941	-0.761	22.671	27.691	15.24
Albuquerque	16.351	20.371	-13.671	-9.95	18.46	24.281	22.681
Bemidji	9.321	17.741	-13.371	8.34	-1.991	5.73	22.00
Billings	13.081	2.031	-11.941	4.32	0.96	22.351	29.00
California	6.611		-7.64	-5.321	19.031		13.621
[Nashville	1.911	-4.561	-5.041	1.60			8.781
Navajo	4.891	11.961	-9.74	1.421	4.691	9.521	14.151
Oklahoma	14.241	14.651	-10.891	-0.421	7.82	22.25	21.411
Phoenix	3.241	-7.73	-19.941	4.251	-0.881	8.89	16.591
Portland	16.351	24.241	-8.981	18.831	-13.641	3.131	25.911

Table 4.5: Overall Satisfaction Measure, by Plans to leave the IHS and Job Characteristics of Respondents
** Standard Deviation **

	All Respondents	Plan to Leave the IHS: Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years	Missing
All Respondents	21.851	17.09	20.421	18.40	17.97	19.91	19.38
Primary Specialty							
Missing	20.89	11.52	4.20				22.531
Primary Care	21.891	18.25	20.45	19.21	18.09	20.90	19.191
Non-Primary Care	21.74)	13.34)	21.21	16.91	15.361	17.59)	19.64)
Type of Employee							
Civil Service	22.151	18.551	18.20	18.96	19.65	17.971	20.121
Commissioned Corps	21.571	15.98	23.32	17.211	16.44	21.381	18.91
Primary IHS Assignment							
Missing	17.601			11.521			3.68
Ptnt Care Prvd	22.261	17.451	20.65)	18.901	17.76	21.181	19.95
Clinical Admin	20.071	15.68	22.481	16.43	17.34	16.901	17.851
General Admin	14.66				7.24		17.76
Other	25.96	21.101		35.811		16.191	
Percent of Time in Non-Patient Care							
Missing	19.65)	20.01	11.42)				19.44)
0	24.551	17.781	20.531	22.631	22.541	20.081	21.891
>0 and <25	21.281	16.831	19.96	17.53	16.361	18.141	18.87
>=25 and <50	21.701	14.051	12.78	22.481	36.09	19.311	
>=50	19.06)'	11.531	27.20	13.95	12.58	16.00	16.541
Job Title							
Missing	20.08	16.09	21.551	13.94	16.281	25.631	17.43
Director/Chief	22.211	12.66	33.81	19.981	16.53	26.20	15.791
Medical Officer	22.011	18.09	18.561	18.40	19.05	17.631	20.901
Clinical Splty	22.311	23.571	20.351	17.64	17.001	20.051	18.20
[Other	18.351	3.261	13.651	9.401	12.79)		21.24

(CONTINUED)

Table 4.5: Overall Satisfaction Measure, by Plans to Leave the IHS and Job Characteristics of Respondents
** Standard Deviation **

		Plan to Leave the IHS					
	All Respondents	Missing	Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
Base Salary(annual)							
Missing	**21.62**	**20.84**	**23.90**				**11.04**
<60,000	21.561	22.741	22.481	22.761	14.571	**18.99**	15.021
60,000 - 69,999	22.371	20.711	**18.32**	19.271	**19.90**	19.061	20.591
~70,000 - 79,999	22.311	**16.77**	17.591	16.331	**18.16**	**14.99**	23.351
80,000 - 89,999	**21.73**	**6.62**	20.151	**19.41**	12.691	6.921	18.84)
90,000 - 99,999	20.441	**8.90**		**18.32**	23.251	**21.81**	**18.11**
>=100,000	17.901	**10.98**	29.011	**10.48**	12.721	**20.68**	16.721
IHS Region							
Missing	20.081	16.091	21.551	13.941	**16.28**	**25.63**	17.431
Headquarters	**17.56**	12.831	**12.40**	**8.78**	**22.40**	**14.89**	20.751
Aberdean	**24.16**	22.971	**25.42**	23.841	25.081	**3.08**	**19.18**
Alaska	22.171	16.671	**24.86**	**14.75**	**18.30**	**27.81**	**18.40**
Albuquerque	21.451	5.501	13.251	25.191	**0.55**	**18.71**	**18.16**
Bemidji	25.271		23.131	9.671	27.531	6.921	**26.85**
Billings	**23.94**		**18.93**	25.201	27.591	**18.04**	**13.28**
California	24.741		41.131				23.751
Nashville	**12.79**						21.671
Navajo	**19.38**	14.201	17.971	15.611	**17.47**	**18.11**	**19.63**
Oklahoma	21.781.	**6.83**	22.121	**23.90**	**12.49**	**19.85**	**18.76**
Phoenix	22.221	20.891	**18.78**	**19.28**	**17.59**	**13.93**	19.351
[Portland	24.971		36.281	26.64)	**1.15**	**25.35**	**21.86**

Table 4.6: Overall Satisfaction Measure, by Plans to Leave the IHS and Personal Characteristics of Respondents

** Mean **

	All Respondents	Plan to Leave the IHS					
		Missing	Yithin 1 Year	Uithin 2 Years	Uithin 3 Years	Within 5 Years	/Not Within 5 Years
All Respondents	9.621	11.481	-10.241	1.541	5.801	16.721	18.291
[gender							
Missing	6.59	17.74	0.001				4.32
Male	10.49	13.561	-9.891	1.03	5.531	18.151	18.611
Female	7.341	6.671	-11.311	2.88	6.251	11.641	17.661
[illegible]city							
Missing	-0.541	17.74	-12.981	0.151			9.731
White, non-Hisp.	10.34	10.691	-8.371	2.141	7.771	18.01	18.131
White Hispanic	0.551	15.651	-17.391	-0.271	-14.311	-28.711	19.791
Black	-0.44		-23.341	1.75	3.081	18.88	14.511
Native American	4.64	11.441	-25.341	-12.291		11.651	9.371
Other	19.79	12.621	4.851	15.631	1.501	19.601	28.10
Age							
Missing	2.251	17.741	-15.691	-1.721		-5.951	14.891
<=30	6.831	6.461	-2.711	3.131	15.911	23.461	15.44
31-40	5.861	12.21)	-15.01	2.131	3.66	10.10	15.80
41-50	12.77	8.691	-8.211	-6.591	5.281	17.951	17.94
>50	18.76)	12.74)	3.59)	6.80)	7.69)	25.24)	27.58
Marital Status							
Missing	9.621	22.20	-10.71	4.591	11.501	15.17	17.56
Married	10.57	13.091	-10.351	1.931	7.52	16.571	18.991
(Never Married	6.69	15.581	-8.74)	2.34	3.411	17.56	16.42
Other	5.891	-1.09	-12.201	-3.92	-3.14	18.141	15.291
Pre-school Kids?							
Pre-school Kids?							
No 0	10.88	10.591	-9.571	-1.48	5.571	18.58	19.73
Yes	7.061	13.901	-11.33	5.521	6.21	11.921	14.761

(CONTINUED)

Table 4.6: Overall Satisfaction Measure, by Plans to Leave the IHS and Personal Characteristics of Respondents

• * Mean • *

	All Respondents	Plan to Leave the IHS					
		Missing	Within 1 Year	Uithin 2 Years	Uithin 3 Years	Within 5 Years	Not Within 5 Years
School-age Kids?							
No	9.19	12.321	-9.28	2.31	5.701	19.101	18.701
Yes	10.57	8.841	-13.381	-1.351	6.351	Il.391	17.721
School Type							
Missing	-5.301	17.741	-20.061	7.611	-18.291	-5.951	7.151
Public	10.171	6.741	-8.631	3.111	5.14	18.251	17.091
Private	8.651	15.951	-7.531	0.911	6.031	15.711	18.44
Canadian	4.67				-14.461		23.80
Other Foreign	23.321	31.121	-19.971	-4.571	13.151	17.231	31.69
iosteopathic	2.411	-1.061	-21.431	-3.751	22.371	4.931	13.93
Activities Prior to IHS							
Missing	20.161	27.711	0.00			44.091	14.49
Grad Med Educ	8.821	14.391	-9.341	1.00	4.731	14.561	17.85
Clinicl,Excl Gov	11.831	-1.171	-16.641	1.451	22.151	26.461	18.90
Other Clinical	10.301	8.961	-12.481	-0.391	-0.851	15.95	21.66
Other	10.881	3.541	-5.861	8.461	13.051	18.601	14.47
Years of Experience in IHS							
Missing	1.01	27.711	-22.581	-7.471			18.511
0-5 yrs	6.211	9.381	-11.641	0.781	3.58	13.161	18.481
6-10 yrs	14.191	17.191	-13.561	6.701	13.491	7.241	18.361
>10 yrs	16.36)	11.971	11.701	0.031	10.951	24.701	17.901
Board Certified in Primary Specialty?							
/Missing	6.001		-11.10	30.521	31.041	-20.401	15.051
Yes	9.401	12.651	-9.44	-1.871	3.071	17.841	18.741
No	IO.341	7.831	-11.721	8.531	12.561	16.181	17.511

(CONTINUED)

Table 4.6: Overall Satisfaction Measure, by Plans to Leave the IHS and Personal Characteristics of Respondents
** Mean **

		Plan to Leave the IHS					
	All Respondents	Missing	Within 1 Year	Uithin 2 Years	Within 3 Years	Uithin 5 Years	Not Within 5 Years
Type of Comnunity When 16 Years Old							
Missing	5.77	-18.92	-15.691	0.901		29.011	19.211
Urban	10.72	22.291	-12.331	0.481	8.151	23.221	19.381
Suburban	8.44	9.001	-11.311	0.361	4.121	12.321	18.331
Rural	10.20	8.79	-6.61	3.28	6.40	15.89	17.34

Table 4.6: Overall Satisfaction Measure, by Plans to Leave the IHS and Personal Characteristics of Respondents
• * Standard Deviation • *

	All Respondents	Plan to Leave the IHS					
		Missing	Within 1 Year	Yithin 2 Years	Uithin 3 Years	Uithin 5 Years	Not Within 5 Years
All Respondents	21.851	17.091	20.42	18.40	17.971	19.911	19.381
Gender							
Missing	7.72						0.75
Male	22.381	17.281	22.611	20.041	16.521	19.061	19.691
Female	20.491	16.98	15.241	13.32	20.591	22.631	18.581
Ethnicity							
Missing	16.66		16.051				9.39)
White, non-Hisp.	21.351	19.531	20.551	18.50	16.511	20.431	18.921
White Hispanic	23.501	11.611	18.631	4.551	4.591		19.82
Black	23.501		20.051	13.161	12.341	10.351	22.30
Native American	20.141	11.291	7.761	24.70		19.121	16.431
Other	22.441	13.551	17.241	11.221	32.311	7.081	22.06
Age							
Missing	18.571		18.501				12.31
<=30	17.021	13.781	18.331	14.121	8.541	14.211	13.38
31-40	22.321	16.851	20.02	20.821	20.011	18.691	18.761
41-50	20.391	17.261	12.211	16.821	14.711	23.221	18.G
>50	21.961	20.211	25.221	10.721	17.30	15.701	22.46
Marital Status							
Missing	17.831		10.581	11.221		32.561	17.32
Married	22.521	17.921	22.151	19.781	18.211	21.151	19.60
/Never Married	20.431	8.051	17.111	16,331	16.151	12.901	21.33
Other	18.901	13.941	15.801	12.271	17.971	8.691	16.X)
Pre-school Kids?							
No	21.66	16.90	18.78	16.00	17.52	19.68	19.45
Yes	22.07	18.21	23.04	20.69	19.19	20.23	18.86

(CONTINUED)

Table 4.6: Overall Satisfaction Measure, by Plans to leave the IHS and Personal Characteristics of Respondents
• * Standard Deviation **

	All Respondents	Plan to Leave the IHS: Missing	Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
School-age Kids?							
No	22.031 17.87 | 20.85	18.651	18.47)		19.041		19.631
Yes	21.47 | 14.94 |	19.031	17.56 |	15.87 |	21.231		19.081
School Type							
Missing	17.901	17.451		17.83 |		5.391	
Public	20.511 16.73 |	18.511	19.66 |	17.73 |	17.77 |		18.621
Private	21.651 13.071	19.381	16.17 |	15.201	26.711		19.601
Canadian	27.051						
Other Foreign	23.991	16.311	27.72 |	25.59 |	23.221	6.471	21.961
Osteopathic	25.361	19.671	28.831	22.781	11.881	4.171	18.111
Activities Prior to IHS							
Missing	27.481						43.821
Grad Med Educ	21.321	12.46 |	20.891	19.04 |	18.00 |	20.071	18.481
Clinicl,Excl Gov	23.15 | 27.281	15.23 |	5.311	12.201	23.711		19.121
Other Clinical	24.79 | 21.641	24.39 |	21.791	11.421	15.76 |		22.491
Other	17.651	26.511	6.091	12.421	22.551	11.01 |	17.421
Years of Experience in IHS							
Missing		29.68 |		19.681			31.761	
0-5 yrs	22.441	18.63 |	19.431	20.19 |	18.18 |	18.631	19.80 |
6-10 yrs	20.311	7.92 |	17.071	12.651	24.181	19.341	20.48 |
>10 yrs	18.52 |	17.411	22.831	13.141	13.081	20.471	17.491
Board Certified in Primary Specialty?							
Missing	20.23 |		9.541				13.46 |
Yes	21.571	16.74 |	21.091	17.71 |	17.21 |	22.23 |	17.771
No	22.64 |	18.57 |	20.361	17.70 |	18.381	13.271	22.79 |

(CONTINUED)

Table 4.6: Overall Satisfaction Measure, by Plans to Leave the IHS and Personal Characteristics of Respondents
• * Standard Deviation **

	All Respondents	Missing	Plan to Leave the IHS: Uithin 1 Year	Uithin 2 Years	Uithin 3 Years	Uithin 5 Years	Not Uithin 5 Years
Type of Con-enmity When 16 Years Old							
Missing	26.591	7.03	18.501	20.181		30.431	20.05
Urban	22.45)	15.241	17.951	11.581	22.831	19.521	19.941
Suburban	22.531	16.741	20.031	25.411	16.911	19.551	19.71
Rural	20.361	11.391	23.391	15.031	14.681	19.051	18.81

4.2.2 Obligated Physicians

Tables **4.7** and **4.8 show mean** values of overall satisfaction and standard deviations for survey respondents within the categories of Obligated Physicians defined above in Section 4.1.2 -- by job and personal characteristics, respectively. The first three pages of these tables report the mean values of overall satisfaction, and the pages that follow contain the standard deviations. Among all survey respondents, satisfaction indexes ranged between a lower bound of -2.74 for those who have current obligations with the IHS and an upper bound of 12.38 for those who have no obligation history **with** the IHS. Respondents whose obligation end dates are unknown, as well as respondents whose service obligations have expired, have satisfaction indexes of approximately 8.11 and 11.26, respectively.

Among the categories of job characteristics presented in Table 4.7, the above pattern holds true for primary specialty, type of employee, primary IHS assignment, and percent of time in non-patient care -- only in terms of the negative mean value of overall satisfaction computed for currently obligated physicians. By primary specialty, primary care providers whose service obligations have expired and non-primary care providers whose obligation end dates are unknown are the most satisfied. However, by type of employee, Commissioned Corps physicians who have no obligation history with the IHS and Civil Service physicians who have unknown obligation end dates have the highest mean values of overall satisfaction.

By primary IHS assignment, patient care providers and general administrators who have expired service obligations, clinical administrators who have no obligation history with the IHS, and "Others" who have unknown obligation end dates have **the** highest mean values of overall satisfaction. Moreover, physicians who spend between **0** and 25 percent **or** more than 50 percent of their time in non-patient care are most satisfied if they have expired service obligations; physicians who spend between 25 and 50 percent of their time in non-patient care are most satisfied if they have no history of **IHS** obligations; and physicians who spend no time in non-patient care are most satisfied if they have unknown obligation end dates.

In terms of the job title category, medical directors or chiefs, medical officers, and clinical specialists with current service obligations have negative mean values of satisfaction. Among physicians with **"Other"** job titles, those with unknown obligation end dates have the lowest mean value of overall satisfaction. On the other hand, medical **officers** with unknown obligation end dates are the most satisfied. In addition, among medical directors or chiefs, those with no history of IHS obligations are the most satisfied; while among clinical specialists, those with expired obligations are the most satisfied.

By total annual salary, survey respondents -- except those earning between $70,000 and $79,999 -- have the lowest mean values of overall satisfaction if they have current service obligations. Physicians with salaries between $60,000 and $89,999 have the highest satisfaction indexes if they have no obligation history with the IHS. However, physicians earning less than $60,000 or at least $90,000 have the highest mean values of overall satisfaction if they expired service obligations.

Among the heavily populated II-IS regions, the lowest mean values of overall satisfaction were computed for physicians with current service obligations. Specifically, Navajo, Phoenix, and Aberdeen -- the first, second and fifth most populated IHS regions -- have the greatest negative satisfaction indexes, while Oklahoma -- the third most populated region -- has the lowest positive satisfaction index. In Alaska -- the fourth most populated IHS region -- physicians with unknown obligation end dates are least satisfied, and those with expired service obligations are the most satisfied.

In Table 4.8, currently obligated physicians received the lowest mean values of overall satisfaction among respondent groups within the following categories: Gender; Age of Children; Activities prior to IHS; and Board Certification in Primary Specialty. By gender, both male and female physicians with no history of an IHS obligation have tbe highest mean values of overall satisfaction. Similarly, among survey respondents without either pre-school-age or school-age children, those with no obligation history have high mean values. However, those with expired obligations are the most satisfied. Among respondents with either pre-school-age or school-age children, those with unknown obligation end dates are the most satisfied.

Survey respondents with expired service obligations received tbe highest mean values of overall satisfaction among those receiving their graduate medical education prior to entering the II-IS. However, among survey respondents involved in some other activity prior to entering the IHS, those with no history of IHS obligations received the highest mean values of overall satisfaction.

In terms of certification in primary specialty and type of community, physicians with expired service obligations have the highest satisfaction indexes among those who are board certified and who resided in suburban communities at age 16. However, physicians with no obligation history in the IHS have the highest indexes among those who are not board certified and who resided in urban communities. Among survey respondents who lived in rural areas at age 16, those with unknown obligation end dates are the most satisfied.

Among all survey respondent groups by etbnicity -- except white, Hispanic physicians -- those with current IHS obligations received the lowest mean values of overall satisfaction. Among white, Hispanic respondents, those with expired service obligations received the lowest mean values, and those

with no history of IHS obligations received the highest mean values. Similarly, among black physicians, those with no obligation history in the IHS have the highest satisfaction indexes. Among Native Americans, the highest mean values of overall satisfaction were computed for physicians with unknown obligation end dates.

By age, survey respondents with current obligations received the lowest satisfaction indexes among those who are 50 years of age or less. Among respondents over 50 years of age, those with no obligation history in the IHS received the lowest satisfaction indexes; and those with expired service obligations received tbe highest satisfaction indexes. Physicians under 30 years of age who have unknown obligation end dates, physicians between the ages of 31 and 40 who have expired obligations, and physicians between the ages of 41 and 50 who have no history of IHS obligations are the most satisfied.

In terms of marital status, married physicians are most satisfied if they have no history of IHS obligations and least satisfied if they have current service obligations. On the other hand, physicians who never married are most satisfied if they have unknown obligation end dates and least satisfied if they have no obligation history.

Among physicians who received their graduate medical education in public institutions or in osteopathic institutions, those with current service obligations received the lowest mean values of overall satisfaction, and those with expired service obligations received the highest mean values. Physicians who attended private institutions are least satisfied if they have unknown obligation end dates and most satisfied if they have no history of IHS obligations. Similarly, international medical graduates (IMGs) are most satisfied if they have no obligation history. However, these respondents are least satisfied if they have current service obligations.

Among survey respondents who have at most five years of experience with the IHS, those with unknown obligation end dates have the highest satisfaction indexes, and those with current service obligations have the lowest. Respondents who have between six and ten years of experience are most satisfied if they have no obligation history with the IHS and least satisfied if they have unknown obligation end dates. On the other. hand, respondents who have more than ten years of experience are least satisfied if they have no obligation history and most satisfied if they have expired service obligations.

According to the final category of personal characteristics, physicians who resided in suburbs at age 16 are least satisfied if they have unknown obligation end dates and most satisfied if they have no obligation history with the IHS. On the other hand, physicians who lived in rural communities are most

satisfied if they have unknown obligation end dates and least satisfied if they have current service obligations. Similarly, among physicians who lived in urban communities, those with current obligations have the lowest mean values of overall satisfaction. However, those with no history of IHS obligations have the highest mean values.

Table 4.7: Overall Satisfaction Measure, by Status of Service Obligation and Job Characteristics of Respondents

** Mean **

		Status of Service Obligation				
	All Respondents	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
All Respondents	9.621	-2.741	11.26	8.111	12.351	2.00
Primsry Specialty						
Missing	3.081	-10.711			19.10	-8.251
Primary Care	10.491	-2.01	12.971	5.561	12.511	12.921
Non-Primary Care	7.78	-3.431	7.101	18.281	11.651	0.631
Type of Employee						
Civil Service	8.431	-2.28	3.17	19.491	11.151	14.49
Commissioned Corps	10.651	-3.04	13.85	5.26	13.891	-6.33
Primsry IHS Assignment						
Missing	0.991	-22.751			9.24	0.00
Ptnt Care Prvd	9.141	-0.961	11.521	5.561	11.351	2.501
Clinical Admin	11.691	-17.54	8.761		17.76	
General Admin	18.431		19.191		18.121	
Other	5.47	-14.20	14.49	18.281	7.16)	
Percent of Time in Non-Patient Care						
Missing	10.201	-19.76	20.381		18.18	0.00
0	10.02	-1.071	3.36	18.28	13.271	12.921
>0 and <25	8.58)	-1.211	12.29)	5.56)	.10.61	-7.93)
>=25 and <50	7.94	-5.70	3.411		13.26)	
>=50	15.41	-16.73	18.501		16.63	

Table 4.7: Overall Satisfaction Heasute, by Status of Service Obligation and Job Characteristics of Respondents

** Mean **

		Status of Service Obligation				
	All Respondents	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Hissing
(Job Title						
Missing	10.981	-3.95)	11.251	18.281	15.531	
Director/Chief	14.48	-13.881	15.261		18.261	
Medical Officer	7.731	-2.411	2.56	19.491	10.511	14.491
Clinical Spity	9.82	-3.061	17.021	-8.05	13.141	-9.501
Other	12.571	15.571	11.521	5.411	14.371	0.00
Base Salary(annual)						
Missing	-2.24	-3.02	-0.20	5.67	-5.72	
<60,000	4.80	-2.14	27.75	19.49	7.40	
60,000 - 69,999	7.06	-5.57	3.05		11.14	3.12
70,000 - 79,999	6.52	-1.41	2.20	-8.05	11.33	
80,000 - 89,999	12.19	2.10	9.45		18.64	0.00
90,000 - 99,999	18.16	-21.16	23.35	17.74	15.50	
>=100,000	17.26	13.88	18.43		17.00	0.63

Table 4.7: Overall Satisfaction Measure, by status of Service Obligation and Job Characteristics of Respondents

** Mean **

	All Respondents	Status of Service Obligation: Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
IHS Region						
Missing	10.98	-3.951	11.251	18.28	15.531	
[Headquarters	10.51	6.521	12.02	-6.931	11.961	0.00
Aberdean	9.71	-7.43)	28.09		11.701	
Alaska	13.081	-4.161	20.60	-8.051	13.011	-19.631
Albuquerque	16.351	6.981	24.021		15.251	0.631
Bemidji	9.321	-13.581	9.771		17.74	24.02
Billings	13.081			10.21	12.39	14.66
California	6.611	20.241		3.091		1.05
Nashville	1.91	-5.551	-5.041		12.851	
Navajo	4.891	-9.651	-0.16	19.491	9.261	
Oklahoma	14.24	5.84)	13.511		16.271	
Phoenix	3.24	-9.541	-0.471		8.031	14.49)
[Portland	16.351		-10.87	22.591		19.521

Table 4.7: Overall Satisfaction Measure, by Status of Service Obligation and Job Characteristics of Respondents
• * Standard Deviation **

		Status of Service Obligation				
	All Respondents	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
All Respondents	21.85	22.021	21.65	14.261	20.87	26.011
Primary Specialty						
Missing	20.891	10.841			20.541	11.671
Primary Care	21.891	22.531	22.011	15.10	20.791	46.04
Non-Primary Care	21.741	22.051	20.401		21.221	
Type of Employee						
Civil Service	22.151	23.471	16.661		21.94)	43.821
Commissioned Corps	21.571	21.201	22.471	14.73	19.36	11.52)
Primary IHS Assignment						
Missing	17.60				15.331	
Ptnt Care Prvd	22.261	22.001	23.001	15.10	21.34	30.011
Clinical Admin	20.071	13.871	16.461		18.611	
General Admin	14.661		7.051		17.151	
Other	25.961	37.171	48.221		17.64)	
Percent of Time in Non-Patient Care						
Missing	19.651	15.391	1.921		13.651	
0	24.551	23.84	24.821		23.91	46.04
>0 and <25	21.281	22.68	22.401	15.10	19.571	12.111
>=25 and <50	21.701	14.751	17.661		23.06	
>=50	19.061	16.091	15.88		18.59	

Table 4.7: Overall Satisfaction Measure, by Status of Service Obligation and Job Characteristics of Respondents
• * Standard Deviation **

	All Respondents	Status of Service Obligation: Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
Job Title						
Missing	20.08	14.08)	21.63)		19.211	
Director/Chief	22.211	26.98	20.411		19.631	
Medical Officer	22.011	22.031	19.71		21.641	43.82
Clinical Spity	22.31	21.96	22.601		19.371	14.331
/Other	18.35	15.99	21.54	17.451	17.261	
Base Salary(annual)						
Missing	21.621	20.13)	27.62)	17.83)	16.94)	
<60,000	21.561	24.36			19.671	
160,000 - 69,999	22.371	19.711	16.201		22.291	36.721
~70,000 - 79,999	22.311	23.13	21.52		21.52	
80,000 - 89,999	21.73	27.73	22.831		17.23	
90,000 - 99,999	20.44		19.42		20.24	
>=100,000	17.901	2.541	16.971		18.63	

Table 4.7: Overall Satisfaction Measure, by Status of Service Obligation and Job Characteristics of Respondents
** Standard Deviation **

		Status of Service Obligation				
	All Respondents	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
IHS Region						
Missing	20.08	14.081	21.631		19.211	
Headquarters	17.561	10.261	22.16)		15.761	
Aberdean	24.16)	11.81	9.26		24.871	
Alaska	22.171	15.11	22.631		21.41	
Albuquerque	21.451	16.431	18.23		23.581	
Bemidji	25.271	22.95	14.82		27.391	
Billings	23.941	35.471	22.211		19.351	
California	24.741	1.70	7.28		42.86)	
Nashville	12.791	1.41			15.91	
Navajo	19.381	16.38	19.501		18.281	
Oklahoma	21.781	27.60	19.341		20.651	
Phoenix	22.221	22.901	22.991		19.73	43.821
Portland	24.971	25.941	19.31		25.041	

Table 4.8: Overall Satisfaction Ueasure, by Status of Service Obligation and Personal Characteristics of Respondents

• * Mean • *

	All Respondents	Status of Service Obligation: Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Hissing
All Respondents	9.621	-2.74	11.261	8.111	12.351	2.001
Gender						
Missing	6.591			17.74	4.321	0.00
Male	10.491	-3.771	12.21	5.671	12.69	23.05
Female	7.34	-1.26	8.301	5.72	11.451	-18.06
Ethnicity						
Missing	-0.54)			17.741	-3.22	0.00
White, non-Hisp.	10.34	-1.80	13.07)	1.10	11.73	2.50
White Hispanic	0.551	-3.261	-12.121		6.36	
Black	-0.44	-7.431	3.831		11.481	
Native American	4.64	-3.271	8.741	19.49	11.681	
Other	19.791	3.261	10.291		24.741	
Age						
Mi..... rssing	2.251	-1.721		17.741	0.93	0.00
<=30	6.831	3.411		18.281	8.00	-19.63)
31-40	5.86	-3.251	8.771	1.50	8.891	-16.501
41-50	12.771	-4.321	13.53		15.05~	0.631
>50	18.761		20.561		18.151	45.481
Marital Status						
Missing	9.62	0.941	-11.971		12.36	22.74
[Married	10.571	-5.811	12.36	5.261	13.831	-7.93
Never Married	6.691	7.951	6.84	19.49	5.791	
Other	5.891	-0.711	8.751		7.541	-19.631

Table 4.8: Overall Satisfaction Measure, by Status of Service Obligation and Personal Characteristics of Respondents

• * Wean • *

		Status of Service Obligation				
	All Respondents	(Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
Pre-school Kids?						
No	10.881	0.421	13.901	1.50	12.651	2.001
Yes	7.061	-8.051	8.211	18.01	11.551	
[School-age Kids?						
No	9.191	-0.131	11.29)	5.701	11.121	8.621
Yes	10.571	-9.991	11.221	17.741	15.55~	-7.931
School Type						
Missing	-5.301	-5.691	-16.281	17.741	-4.581	0.00
Public	10.171	1.44	14.301	10.28	10.50~	45.481
Private	8.651	-4.701	6.46)	-8.05)	14.741	-18.06
[Canadian	4.67				4.67	
Other Foreign	23.321	-22.661			24.471	
Osteopathic	2.411	-13.231	19.971		3.591	0.631
Activities Prior to IHS						
Missing	20.161		44.091		27.71	9.661
Grad Med Educ	8.821	-2.111	11.781	9.731	11.281	-19.631
Clinicl,Excl Gov	11.83	-11.171	1.661		16.711	
Other Clinical	10.301	-3.661	11.441		12.671	0.631
[Other	10.881	2.511	7.681	5.671	12.011	
Years of Experience in IHS						
Missing	1.01				-4.191	9.661
0-5 yrs	6.211	-3.421	6.571	9.90	9.88	-19.631
6-10 yrs	14.19	2.011	9.981	-6.931	21.411	
>10 yrs	16.361	17.981	18.671	17.74	15.511	0.631

Table 4.8: Overall Satisfaction Measure, by Status of Service Obligation and Personal Characteristics of Respondents

** Mean **

		Status of Service Obligation				
	All Respondents	Obligation: End Date in future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
Board Certified in Primary Specialty?						
Missing	6.001	-22.751	3.57		12.00	0.00
Yes	9.40	-5.38	13.281	9.73	11.39	2.501
No	10.341	1.97	5.07	5.671	14.411	
Type of Community When 16 Years Old						
Missing	5.77	-13.951	7.431		8.04	0.00
[Urban	10.72	2.57	8.151		13.101	45.481
Suburban	8.441	-6.071	11.751	-7.491	11.83	-18.061
[Rural	10.20	-2.60	13.531	18.501	12.531	0.631

Table 4.8: Overall Satisfaction Measure, by Status of Service Obligation and Personal Characteristics of Respondents
• * Standard Deviation • *

		Status of Service Obligation				
	All Respondents	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
All Respondents	21.851	22.021	21.651	14.261	20.871	26.01
[Gender						
Missing	7.72				0.75	
Male	22.381	23.981	21.411	17.831	21.421	31.71
Female	20.491	19.08	22.411	19.48)	19.291	2.21
Ethnicity						
Missing	16.66)				17.491	
White, non-Hisp.	21.351	21.811	21.761	14.89)	20.401	30.011
White Hispanic	23.50	29.521	14.961		22.871	
Black	23.501	27.791	12.87)		13.311	
[Native American	20.141	18.961	19.05		20.381	
Other	22.44	6.06)	23.34		22.121	
Age						
Missing	18.571				21.72	
<=30	17.021	16.99			16.92)	
31-40	22.321	23.921	22.391	15.591	20.401	
41-50	20.391	14.781	18.931		20.631	
>50	21.96		21.691		22.051	
Marital Status						
Missing	17.831	17.131			15.15	32.161
Married	22.521	21.88)	22.181	14.731	21.311	12.111
Never Married	20.431	22.041	22.531		19.671	
Other	18.90	21.74	16.891		18.431	

Table 4.8: Overall Satisfaction Measure, by Status of Service Obligation and Personal Characteristics of Respondents
** Standard Deviation • *

	All Respondents	Status of Service Obligation: Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
(Pre-school Kids?						
No	21.661	22.00	21.24	15.59)	21.06	26.01
Yes	22.071	21.301	21.871	0.38	20.42)	
[School-age Kids?						
No	22.031	21.661	22.951	15.241	21.341	33.40
Yes	21.47	21.801	20.07		19.321	12.111
School Type						
Missing	17.90		27.301		15.44	
Public	20.51	23.88	20.361	14.92	19.08	
Private	21.65	19.04	21.451		20.33	2.21)
[Canadian	27.05				27.05	
Other Foreign	23.99				23.12	
[Osteopathic	25.361	21.04	24.401		24.671	
Activities Prior to IHS						
Missing	27.48					32.10
[Grad Med Educ	21.321	20.711	21.371	15.42	20.35	
Clinicl,Excl Gov	23.15	19.42)	23.51)		21.45)	
[Other Clinical	24.79	29.601	28.50		23.24	
Other	17.651	25.27	14.491	17.83	17.88	
Years of Experience in IHS						
[Missing	29.68				30.60	32.101
0-5 yrs	22.44	21.811	24.851	15.57)	21.23	
6-10 yrs	20.311	28.191	20.331		17.351	
>10 yrs	18.52	8.33	17.46		19.251	

Table 4.8: Overall Satisfaction Measure, by Status of Service Obligation and Persons1 Characteristics of Respondents
• * Standard Deviation • *

		Status of Service Obligation				
	All Respondents	Obligation: [End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
Board Certified in Primary Specialty?						
Missing	20.231		26.49		18.10	
Yes	21.571	22.421	21.06	15.421	20.151	30.011
No	22.64	20.921	22.60	17.83	22.44)	
Type of Community When 16 Years Old						
Missing	26.591		18.201		31.721	
Urban	22.451	26.061	23.50		20.741	
Suburban	22.53	25.301	19.99	0.79	21.131	2.211
Rural	20.36	14.491	22.281	0.89	20.06	

4 3 Scores for the 17 dimensions

4.3.1 Planners

Tables 4.9 through 4.11 report mean constructed satisfaction and importance ratings, as well as mean satisfaction and importance scores, for individual dimensions by the six categories outlined in Section 3.4 and by the categories of Planners defined in Section 4.1.1. As reported above in Section 3.3, quality of care was ranked highly, both in terms of the mean rating and the mean satisfaction and importance scores. Within this dimension, the highest average values were computed among physicians who reported no future plans to leave the IHS. Relations with the Native American community, local living conditions, and number of patient care hours were also ranked highly. Again, those with no future plans to leave the IHS received both the highest average ratings and the highest average satisfaction and importance scores -- with the exception of local living conditions which received the highest satisfaction score among those planning to leave the service within the next five years.

The lowest mean satisfaction and importance rating was computed for number of medical support staff. This dimension also received a negative mean satisfaction score. However, in terms of mean importance, number of medical support staff was ranked highly. Within this dimension, both the lowest average rating and the lowest average satisfaction score were computed among physicians planning to leave the IHS within the next year. On the other hand, the lowest average importance score was computed among those planning to leave the service within the next two years.

Table 4.9: Mean Composite Rating Score,
by Category and Plans to Leave the IHS
** by Category Group **

Category Group	Category	All Respondents	Missing	Within 1 Year	Within 2 Years	Within 3 Years	Within 5 Years	Not Uithin 5 Years
Quality/Adequacy of Care	Quality of Care	3.55	4.51	1.66	2.89	3.55	3.61	4.30
	Referral Services	1.02	1.38	-0.34	0.64	0.17	1.57	1.64
Quality/Adequacy of Facilities	Administrative Support	-0.19	1.08	-2.60	-1.22	-0.90	0.88	0.78
	Number of Medical Support Staff	-2.21	-0.54	-3.77	-2.52	-2.98	-1.44	-1.75
	Quality of Medical Support Staff	1.59	1.23	-0.33	1.08	1.56	2.16	2.41
	IHS Physical Facilities	-0.28	0.08	-1.45	-0.57	-0.62	-0.51	0.34
	Patient Care Hours	1.94	2.46	0.28	1.25	0.89	2.71	2.75
Education/Career Opportunities	CME Opportunities	0.64	0.77	-1.14	-0.26	0.54	1.03	1.50
	Career Development Opportunities	-0.48	-1.17	-2.39	-1.08	-0.63	0.12	0.40
Finances	Annual Compensation	-0.42	-1.43	-2.25	-1.39	-0.46	0.54	0.49
	Future IHS Compensation	-0.58	-1.58	-2.45	-1.83	-1.22	0.25	0.58
	Loan Repayment Program	-0.36	0.08	-1.93	1.52	-1.75	0.21	-0.38
Living Conditions	Relations uith Native Americans	3.04	4.00	1.73	1.83	2.47	3.61	3.78
	Housing Benefits	-0.07	-0.09	-0.89	-0.40	0.25	0.63	0.07
	Local Living Conditions	2.49	2.42	0.63	1.19	2.59	3.31	3.41
Family Impact	Impact on the Family	1.25	0.54	-0.88	0.37	1.26	1.79	2.22
	Job Opportunities for Spouse	1.35	1.33	-0.53	1.12	1.34	1.70	1.96

Table 4.10: Mean Satisfaction Score,
by Category and Plans to Leeve the IHS
• * by Category Group **

Category Group	Category	All Respondents	Missing	Within 1 Year	Within 2 Years	Within 3 Years	Uithin 5 Years	Not Within 5 Years
Quality/Adequacy of Cafe	Quality of Care	1.09	1.23	0.82	1.01	1.16	1.10	1.19
	Referral Services	0.41	0.50	0.12	0.40	0.31	0.50	0.50
Quality/Adequacy of Facilities	Administrative support	-0.00	0.35	-0.68	-0.19	-0.02	0.41	0.17
	Number of Medical Support Staff	-0.72	-0.22	-1.05	-0.72	-0.84	-0.54	-0.68
	Quality of Medical Support Staff	0.55	0.40	0.14	0.45	0.60	0.76	0.71
	IHS Physical Facilities	-0.07	-0.08	-0.30	-0.15	-0.09	-0.15	0.06
	Patient Care Hours	0.78	0.98	0.54	0.74	0.51	0.99	0.85
Education/Career Opportunities	CME Opportunities	0.25	0.23	-0.21	0.03	0.29	0.33	0.47
	Career Development opportunities	-0.15	-0.37	-0.75	-0.26	-0.14	0.13	0.06
Finances	Annual Compensation	0.04	-0.43	-0.37	-0.19	0.15	0.28	0.26
	Future IHS Compensation	-0.05	-0.39	-0.46	-0.36	-0.25	0.19	0.24
	Loan Repayment Program	-0.09	-0.15	-0.45	0.45	-0.63	0.00	-0.02
Living Conditions	Relations with Native Americans	0.99	1.23	0.84	0.81	0.84	1.06	1.08
	Housing Benefits	-0.11	-0.14	-0.20	-0.24	0.08	-0.03	-0.09
	Local Living Conditions	0.86	0.84	0.52	0.65	0.86	1.06	1.02
Family Impact	Impact on the Family	0.40	0.19	-0.12	0.26	0.41	0.53	0.62
	Job Opportunities for Spouse	0.40	0.19	0.01	0.51	0.38	0.38	0.52

Table 4.11: Mean Importance Score,
by Category and Plans to Leave the IHS
• * by Category Group • *

Category Group	Category	All Respondents	Missing	Uithin 1 Year	Uithin 2 Years	Within 3 Years	Within 5 Years	Not Within 5 Years
Quality/Adequacy of Care	Quality of Care	3.18	3.53	2.61	2.83	3.02	3.28	3.47
	Referral Services	2.50	2.54	2.12	2.15	2.48	2.73	2.70
Quality/Adequacy of Facilities	Administrative Support	2.94	3.29	3.07	2.64	2.95	2.91	2.96
	Number of Medical Support Staff	2.79	2.85	2.72	2.62	3.02	2.84	2.80
	Puality of Medical Support Staff	2.91	3.02	2.44	2.61	2.91	3.04	3.14
	IHS Physical Facilities	2.34	2.32	2.05	2.26	2.55	2.51	2.39
	Patient Care Hours	2.61	2.64	1.99	2.15	2.26	2.77	3.02
Education/Career Opportunities	CHE Opportunities	2.41	2.59	2.10	2.10	2.29	2.51	2.61
	Career Development Opportunities	2.49	2.49	2.40	2.33	2.59	2.52	2.55
Finances	Annual Compensation	2.59	2.85	2.25	2.39	2.76	2.76	2.67
	Future IHS Compensation	2.69	2.85	2.48	2.40	2.88	2.91	2.75
	Loan Repayment Program	2.11	1.71	2.06	2.50	1.75	2.14	2.12
Living Conditions	Relations with Native Americans	2.84	3.08	2.12	2.46	2.81	3.01	3.17
	Housing Benefits	1.94	2.12	1.65	1.58	2.06	2.05	2.08
	Local Living Conditions	2.77	2.78	2.15	2.38	2.88	2.90	3.08
Family Impact	Impact on the Family	2.97	3.08	2.85	2.56	2.87	3.24	3.09
	Job Opportunities for Spouse	2.55	2.80	2.30	2.22	2.79	2.35	2.72

4.3.2 Obligated Physicians

Tables 4.12 through 4.14 report mean constructed satisfaction and importance ratings, as well as mean satisfaction and importance scores, for individual dimensions by the six categories outlined in Section 3.4 and by the categories of obligated Physicians defined in Section 4.1.2. Within the quality of care dimension, the highest average rating was computed among physicians with expired IHS obligations. However, the highest average satisfaction and importance scores were computed among physicians with unknown obligation end dates.

For the Native American community relations dimension, survey respondents with expired service obligations received both the highest mean rating and the highest mean satisfaction and importance scores. Similarly, within the local living conditions dimension, those with expired obligations received the highest satisfaction score. On the other hand, both the highest mean rating and the highest mean importance score were computed among those with unknown obligation end dates. Patient care hours also received the highest average rating among physicians with unknown obligation end dates. Within this dimension, however, those with no obligation history in the IHS received the highest mean satisfaction score, and those with expired obligations received the highest mean importance score.

For the number of medical support staff dimension, both the lowest average rating and the lowest average satisfaction score were computed among those with current service obligations. However, in terms of mean importance, this dimension received the highest score among those with no history of IHS obligations.

Table 4.12: Mean Composite Rating Score,
by Category and Status of Service Obligation
** by Category Group **

Category Group	Category	ALL Respondents	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknoun	N Obligation	o Missing
Quality/Adequacy of Care	Quality of Care	3.55	2.87	4.14	4.75	3.50	2.75
	Referral Services	1.02	0.51	1.04	-2.75	1.19	d.75
Quality/Adequacy of Facilities	Administrative Support	-0.19	-1.33	-0.23	-2.00	0.18	-3.25
	Number of Medical Support Staff	-2.21	-3.21	-2.23	-1.50	-1.93	-3.00
	Quality of Medical Support Staff	1.59	0 . 7 3	1.73	2.50	1.75	2.50
	IHS Physical Facilities	-0.28	-1.27	-0.44	1.00	0.02	0.50
	Patient Care Hours	1.94	0.67	1.77	2.75	2.34	0.25
Education/Career Opportunities	CME Opportunities	0.64	0.04	0.94	-0.50	0.70	0.50
	Career Development Opportunities	-0.48	-1.69	-0.34	0.50	-0.22	-0.75
Finances	Annual Compensation	-0.42	-2.61	-0.34	-1.00	0.14	-1.00
	Future IHS Compensation	-0.58	-2.45	-0.66	-0.60	-0.06	0.00
	Loan Repayment Program	-0.36	0.22	-1.45	0.00	-0.13	-1.00
Living Conditions	Relations with Native Americans	3.04	2.33	3.38	1.75	3.09	5.25
	Housing Benefits	-0.07	-0.78	-0.07	0.60	0.14	-3.33
	Local Living Conditions	2.49	2.19	2.97	3.60	2.40	0.33
Family Impact	Impact on the Family	1.25	-0.76	1.47	3.67	1.67	2.33
	Job Opportunities for Spouse	1.35	0.12	1.80	-0.33	1.54	-2.00

Table 4.13: Mean Satisfaction Score,
by Category and Status of Service Obligation
• * by Category Group • *

Category Group	Category	All Respondents	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
Quality/Adequacy of Care	Quality of Care	1.09	0.98	1.19	1.25	1.09	0.75
	Referral Services	0.41	0.24	0.38	-0.75	0.48	0.25
Quality/Adequacy of Facilities	Administrative Support	-0.00	-0.36	-0.09	-0.50	0.14	-0.75
	Number of Medical Support Staff	-0.72	-0.93	-0.85	0.00	-0.62	-1.00
	Quality of Medical Support Staff	0.55	0.25	0.55	1.00	0.63	0.75
	IHS Physical Facilities	-0.07	-0.34	-0.23	0.50	0.05	0.00
	Patient Care Hours	0.78	0.41	0.70	0.75	0.91	0.00
Education/Career Opportunities	CME Opportunities	0.25	0.03	0.37	0.00	0.26	0.50
	Career Development Opportunities	-0.15	-0.49	-0.08	0.25	-0.09	-0.50
Finances	Annual Compensation	0.04	-0.63	0.07	-0.40	0.22	-0.25
	Future IHS Compensation	-0.05	-0.61	-0.07	-0.20	0.11	0.00
	Loan Repayment Program	-0.09	0.00	-0.41	2.00	0.00	-1.00
Living Conditions	Relations with Native Americans	0.99	0.88	1.06	0.75	0.98	1.50
	Housing Benefits	-0.11	-0.47	-0.17	0.00	0.01	-1.33
	Local Living Conditions	0.86	0.74	0.98	0.80	0.86	0.00
Family Impact	Impact on the Family	0.40	-0.17	0.46	1.33	0.52	1.00
	Job Opportunities for Spouse	0.40	0.01	0.59	0.00	0.43	-0.75

Table 4.14: Mean Importance Score,
by Category and Status of Service Obligation
• * by Category Group • *

Category Group	Category	All Respondents	Obligation: End Date in Future	Obligation: End Date in Past	Obligation: End Date Unknown	No Obligation	Missing
Quality/Adequacy of Care	Duality of Care	3.18	2.98	3.41	3.75	3.14	3.25
	Referral Services	2.50	2.53	2.54	2.75	2.47	3.00
Quality/Adequacy of Facilities	Administrative Support	2.94	3.05	3.05	3.50	2.87	3.25
	Number of Medical Support Staff	2.79	2.95	2.80	2.75	2.73	3.50
	Duality of Medical Support Staff	2.91	2.84	3.04	2.50	2.89	3.00
	IHS Physical Facilities	2.34	2.48	2.31	1.50	2.32	3.00
	Patient Care Hours	2.61	2.46	2.76	2.50	2.59	3.25
Education/Career Opportunities	CME Opportunities	2.41	2.50	2.44	1.75	2.38	2.50
	Career Development Opportunities	2.49	2.71	2.62	2.00	2.40	1.50
Finances	Annual Compensation	2.59	3.02	2.64	1.80	2.47	3.00
	Future IHS Compensation	2.69	3.13	2.78	1.80	2.55	3.00
	Loan Repayment Program	2.11	2.46	1.85	0.00	2.13	1.00
Living Conditions	Relations with Native Americans	2.84	2.66	2.94	2.75	2.85	3.25
	Housing Benefits	1.94	1.92	1.89	1.80	1.96	2.33
	Local Living Conditions	2.77	2.81	2.96	3.00	2.69	3.00
Family Impact	Impact on the Family	2.97	3.20	3.12	2.25	2.87	3.00
	Job Opportunities for Spouse	2.55	2.99	2.74	3.00	2.39	2.00

4.4 Responses to the Open-Ended Question

The survey offered physicians an opportunity to comment on whether anything could be changed about the IHS or their assignment in the IHS that would make them more likely to extend their service tenure. Approximately 84 percent of the survey respondents commented in the space provided for this particular question. Upon reviewing the answers provided by respondents, we discovered that several common themes arose. Among respondents of this question, almost 28 percent commented that IHS physicians are not being compensated accordingly and that salaries are not competitive with those of the private sector; and 24 percent complained that a lot of paperwork and secretarial duties are allocated to physicians and not to other, non-clinical staff. This latter group of IHS physicians also commented that the IHS should increase both the number and quality of administrative support staff. Approximately 21 percent of the question respondents complained about the number and quality of medical support staff. Other frequently mentioned answers included decreasing the number of hours worked per week and improving the loan repayment program -- each reported by almost 6 percent of the respondents to the open-ended question; and improving the current promotion system so that clinical talents get rewarded rather than overlooked and clarifying recruitment promises so that in-coming physicians are not misled about their future in the IHS -- each reported by approximately 4 percent of the respondents. Interestingly, almost 46 percent of the IHS physicians who mentioned false recruitment promises as a deterrent to remaining in the IHS also reported that the loan repayment program is a frequent target of false. advertising.

We further analyzed the group of survey respondents who offered comments to the open-ended question -- both in terms of their overall satisfaction and their expected tenure in the IHS. The satisfaction levels of respondents who provided any one of the seven comments discussed above were significantly below the levels of respondents who did not comment.[3]

With respect to expected tenure, no statistically significant differences exist between IHS physicians who mentioned salary, administrative duties, medical support staff, work hours, the loan repayment program, and the promotion system as answers to the open-ended question and those who did not. However, we found statistically significant differences between physicians who discussed false recruitment promises as a deterrent to their remaining in the IHS and those who did not.4 Specifically,

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'By "respondents who did not comment," we mean both non-respondents to the open-ended question and respondents who provided an answer to the open-ended question but not one of the seven comments discussed above.

We computed a chi-square value of 15.581 with 4 degrees of freedom. The p-value was approximately 0.004.

the majority of respondents who offered that comment -- approximately 57 percent -- plan to stay in the IHS for one to two more years. On the other hand, approximately 31 percent of respondents who did not mention false recruitment promises expect to stay in the service for another one or two years.

4.5 Multivariate Analysis of Planned Tenure

The key issue of physician retention was investigated using multivariate techniques. Multiple regression models were selected because so many potential factors could affect the decision to leave the IHS. For example, physicians with pre-school-age children may be concerned about the number of work hours affecting their family life. These same individuals may also report that the impact of IHS service on their families was an important consideration in leaving. Multiple regression modeling helps to sort out which of these answers is contributing, on average, to planned tenure in the IHS. Without these statistical controls for the presence of young children and a spouse, for example, we could inappropriately focus on hours worked as a problem, when the real issue is related to family structure.

The survey provided two questions that we used to develop the planned tenure variable for the regression model: whether the respondent currently plans to leave IHS within the next five years; and if yes, exactly when the respondent plans to resign or retire. For those with a desire to stay longer than five years, we assumed that they plan to leave the IHS in the sixth year. To test whether this assumption was important to the results reported in this section, we reestimated the relevant regression models assuming that the open-ended commitment was for longer periods. The regression results did not materially change.

The regression estimated the effect of different personal and professional characteristics on the respondent's planned tenure. The personal characteristics were: gender, race or ethnicity, marital status, presence of pre-school- and school-age children, type of medical school, activities prior to entering the IHS, years of experience, board certification status, type of community, and specialty. For each individual, the number of years remaining from a service obligation was also included. Only three job characteristics were utilized in the regression: job title, IHS region, and total annual salary. These basic variables were included in all of the regressions estimated.

Several different questions were investigated. First, we considered how each of the 17 aspects of IHS employment affect retention. Three different regression models addressed this question. In the first model, only the satisfaction score for each aspect was included. The second regression was identical to the first, with the exception that importance scores were added as independent control variables. In

the third model, the composite rating score was substituted for the satisfaction and importance scores. The full results from these regressions are shown in Table 4.15.

Table 4.15 presents the results of six different regression models labeled ASP01 to ASP06. In each of these regressions the dependent variable is the number of years that the respondent plans to stay in the IHS. The six regression models represent alternative specifications of the independent variables in the regression. Each of the models contains basic demographic data on the respondents, their jobs, and the number of years remaining in any service obligations. The first page of the regression results presents the goodness-of-fit of the model, labeled the R-square or Adjusted R-square (adjusted for the number of degrees of freedom in the model). The second page of the regression results for each model presents the regression coefficients and information on the statistical significance of the results. The reference category to which these coeffkients should be compared is: male, white, currently married, with no children, graduated from a U.S. public medical school, entered the IHS from residency training, has less than six years experience, is not board certified, grew up in an urban area, practicing in a non-primary care specialty, has a job title in the other category, practices in the IHS headquarters region, and resides in a large metropolitan area.

The basic model, ASP01, contains only these demographic and job-specific variables. The adjusted R-square for this model is .19. The coeffkient for the log of annual salary is positive and statistically significant in this model, but not in models that include measures of satisfaction. ASP02 adds the satisfaction scores discussed in Chapter, 3 to the model. Adding these 17 variables increases the adjusted R-square to .24. ASP03 adds the importance scores to the right hand side of the regression with the result that the adjusted R-square rises again to .36. The model that was used to develop the recommendations is shown in Table 4.15 as model ASP04. The satisfaction and importance scores for the 17 aspects of employment in the IHS are included on the right hand side of this regression along with the overall satisfaction question of whether the respondent would join the IHS again. The adjusted R-square in this model is approximately .40. That is, the right hand side variables explain almost 40% of the variation in planned tenure in the IHS. ASP05 and ASP06 use the composite rating scores described in Chapter 3.

Reviewing the results for model ASP04 shown on page 10 of Table 4.15, we find that satisfaction with administrative support enters the regression with a positive and significant coefficient equal to .183. This means that for every one point increase in satisfaction that the IHS could achieve, the average physician would extend his or her tenure by .183 years. Statistically significant coeffkients can be identified in Table 4.15 by examining the column labeled Prob > |T|. A coeffkient is significant if the

entry in this column is less than .05 -- or . 10 if a lesser standard is desired. Satisfaction with quality of care is statistically significant in this model, but the coefficient is negative. This means that a one point increase in satisfaction with quality of care is associated with shorter planned tenure, on average equal to almost one quarter of one year.

The second type of question analyzed with regression models was the effect of overall satisfaction on plans to leave the IHS. Two different satisfaction measures were employed. The first was based on the composite scores and was described at length above in Section 3.6. The second measure of overall satisfaction was similar in construction to the first but used only the satisfaction scores, not the composite ratings. The results of regressing planned tenure on demographic variables, job characteristics, and overall satisfaction are shown in Table 4.16.

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Model: ASP01
Dependent Variable: STAY_YRS No. Years Plan to Stay in IHS

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	45	524.25311	11.65007	3.593	0.0001
Error	448	1452.54243	3.24220		
C Total	493	1976.79555			

Root MSE	1.80063	R-square	0.2652
Dep Mean	4.06680	Adj R-sq	0.1914
C.V.	44.27641		

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
INTERCEP	1	-13.107466	7.98621291	-1.641	0.1014	Intercept
D_GDR	1	0.089320	0.20545350	0.435	0.6640	dum=1 if Gender=Female
D_RACE1	1	-0.315843	0.43048107	-0.734	0.4635	dum=1 if White Hispanic
D_RACE2	1	-0.425034	0.42180370	-1.008	0.3142	dum=1 if Black
D_RACE3	1	0.489854	0.39182191	1.250	0.2119	dum=1 if Native American
D_RACE4	1	0.033633	0.36652329	0.092	0.9269	dum=1 if Other
D_MARST1	1	-0.170030	0.30751595	-0.553	0.5886	dum=1 if Never Married
D_MARST2	1	-0.040566	0.28083310	-0.144	0.8852	dum=1 if Other
D_PRE	1	-0.404851	0.20201848	-2.004	0.0457	dum=1 if Have Pre-School Kids
D_SCH	1	0.541454	0.19876362	2.724	0.0067	dum=1 if Have School-age Kids
D_SCHL1	1	-0.328992	0.18910474	-1.740	0.0826	dum=1 if U.S./Canadian Private
D_SCHL2	1	0.130018	0.41982311	0.310	0.7569	dum=1 if Foreign
D_SCHL3	1	-0.599311	0.33465266	-1.791	0.0740	dum=1 if U.S. Osteopathic
D_ACTV1	1	0.808199	0.30810068	2.623	0.0090	dum=1 if Clinical, Excluding Gov
D_ACTV2	1	0.705810	0.24144203	2.923	0.0036	dum=1 if Other Clinical
D_ACTV3	1	0.079069	0.31656502	0.250	0.8029	dum=1 if Other
D_EXPR1	1	0.942394	0.26799057	3.517	0.0005	dum=1 if 6 <=exper_yr<=10
D_EXPR2	1	0.311445	0.32292186	0.964	0.3353	dum=1 if 10< exper_yr
D_CERT	1	-0.278093	0.20521107	-1.355	0.1761	dum=1 if Board Cert. in Primary Splty
D_CMNTY1	1	0.194791	0.22275337	0.874	0.3823	dum=1 if Suburban
D_CMNTY2	1	0.144096	0.22875578	0.630	0.5291	dum=1 if Rural
D_SPL	1	0.358025	0.21409600	1.672	0.0952	dum=1 if Specialty=Primary Care
D_EMPL	1	0.225279	0.38916566	0.579	0.5630	dum=1 if Civil Service
D_JOBTL1	1	-0.578354	0.45656144	-1.267	0.2059	dum=1 if Director/Chief
D_JOBTL2	1	-0.766784	0.54483866	-1.407	0.1600	dum=1 if Medical Officer
D_JOBTL3	1	-0.255217	0.44372762	-0.575	0.5655	dum=1 if Clinical Specialty
D_REGN1	1	0.859038	0.65662169	1.308	0.1915	dum=1 if ihsreg=Aberdean
D_REGN2	1	0.135270	0.61277552	0.221	0.8254	dum=1 if ihsreg=Alaska
D_REGN3	1	1.912751	0.57895611	3.304	0.0010	dum=1 if ihsreg=Albuquerque
D_REGN4	1	0.736520	0.69986693	1.052	0.2932	dum=1 if ihsreg=Bemidji
D_REGN5	1	0.652020	0.61927916	1.053	0.2930	dum=1 if ihsreg=Billings
D_REGN6	1	0.4875%	0.84996561	0.574	0.5665	dum=1 if ihsreg=California
D_REGN7	1	0.526133	1.24899254	0.421	0.6738	dum=1 if ihsreg=Nashville
D_REGN8	1	0.077335	0.56315621	0.137	0.8908	dum=1 if ihsreg=Navajo
D_REGN9	1	1.056847	0.52811364	2.001	0.0460	dum=1 if ihsreg=Oklahoma
D_REGN10	1	-0.096602	0.54204082	-0.178	0.8586	dum=1 if ihsreg=Phoenix
D_REGN11	1	0.959816	0.63951380	1.501	0.1341	dum=1 if ihsreg=Portland
D_LOC2	1	-0.876743	0.51137354	-1.714	0.0871	metro area: 250K - 1 million
D_LOC3	1	0.210535	0.54128782	0.389	0.6975	metro area: <250K
D_LOC4	1	-1.524619	0.73817268	-2.065	0.0395	non-metro/urban; 20K+; adj to metro
D_LOC5	1	-0.225009	0.42919695	-0.524	0.6004	non-metro/urban; 20K+; not adj to metro
D_LOC6	1	-0.445879	0.61861764	-0.721	0.4714	non-metro/urban; 2.5-20K; adj to metro
D_LOC7	1	-0.394553	0.44214715	-0.892	0.3727	non-metro/urban; 2.5-20K; not adj metro
D_LOC8	1	-0.560877	0.58047036	-0.966	0.3344	rural or <2.5K urban
YRSTDGO	1	0.115844	0.09364030	1.237	0.2167	Obligation Remaining(in Years)
LSAL_YRV	1	1.505445	0.69812050	2.156	0.0316	log(natural) of revised annual salary

Table 4.15
Planned Tenure and Satisfaction uith 17 Aspects of IHS

Model: ASP02
Dependent Variable: STAY_YRS No. Years Plan to Stay in IHS

Analysis of Variance

Source	DF	sun of Squares	Mean Square	F Value	Prob>F
Model	62	661.63008	10.67145	3.497	0.0001
Error	431	1315.16547	3.05143		
C Total	493	1976.79555			

Root MSE	1.74683	R-square	0.3347
Dep Mean	4.06680	Adj R-sq	0.2390
C.V.	42.95350		

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
INTERCEP	1	-4.357735	8.167544%	-0.534	0.5939	Intercept
D_GDR	1	0.008350	0.20517862	0.041	0.9676	dum=1 if Gender=Female
D_RACE1	1	-0.257239	0.43193163	-0.5%	0.5518	dum=1 if White Hispanic
D_RACE2	1	-0.420330	0.42436246	-0.990	0.3225	dum=1 if Black
D_RACE3	1	0.444137	0.39444754	1.126	0.2608	dum=1 if Native American
D_RACE4	1	0.058042	0.36477263	0.159	0.8736	dum=1 if Other
D_MARST1	1	-0.219431	0.30493580	-0.720	0.4722	dum=1 if Never Married
D_MARST2	1	0.142755	0.27541253	0.518	0.6045	dum=1 if Other
D_PRE	1	-0.367943	0.19989928	-1.841	0.0664	dum=1 if Have Pre-School Kids
D_SCH	1	0.558797	0.19629831	2.847	0.0046	dum=1 if Have School-age Kids
D_SCHL1	1	-0.3798%	0.18557627	-2.047	0.0413	dum=1 if U.S./Canadian Private
D_SCHL2	1	0.033831	0.41593108	0.081	0.9352	dum=1 if Foreign
D_SCHL3	1	-0.466670	0.33170932	-1.407	0.1602	dum=1 if U.S. Osteopathic
D_ACTV1	1	0.638020	0.30736057	2.076	0.0385	dum=1 if Clinical, Excluding Gov
D_ACTV2	1	0.462350	0.24408953	1.894	0.0589	dum=1 if Other Clinical
D_ACTV3	1	-0.003131	0.31314991	-0.010	0.9920	dum=1 if Other
D_EXPR1	1	0.930484	0.26680116	3.488	0.0005	dum=1 if 6 <=exper_yr<=10
D_EXPR2	1	0.344756	0.32149323	1.072	0.2842	dum=1 if 10< exper_yr
D_CERT	1	-0.063707	0.207407%	-0.307	0.7589	dum=1 if Board Cert. in Primary Splty
D_CMNTY1	1	0.126156	0.22214174	0.568	0.5704	dum=1 if S&urban
D_CMNTY2	1	-0.024902	0.22688164	-0.110	0.9127	dum=1 if Rural
D_SPL	1	0.204844	0.22125480	0.926	0.3551	dum=1 if Specialty=Primary Care
D_EMPL	1	-0.075931	0.39327741	-0.193	0.8470	dum=1 if Civil Service
D_JOBTL1	1	-0.645191	0.45328726	-1.423	0.1554	dum=1 if Director/Chief
D_JOBTL2	1	-0.725211	0.54228205	-1.337	0.1818	dum=1 if Medical Officer
D_JOBTL3	1	-0.220827	0.44130162	-0.500	0.6170	dum=1 if Clinical Specialty
D_REGN1	1	0.997802	0.65064435	1.534	0.1259	dum=1 if ihsreg=Aberdean
D_REGN2	1	0.126241	0.61112428	0.207	0.8364	dum=1 if ihsreg=Alaska
D_REGN3	1	1.550794	0.57909991	2.678	0.0077	dum=1 if ihsreg=Albuquerque
D_REGN4	1	0.615531	0.69330308	0.888	0.3751	dum=1 if ihsreg=Bemidji
D_REGN5	1	0.526660	0.61185781	0.861	0.3899	dum=1 if ihsreg=Billings
D_REGN6	1	0.521185	0.86421209	0.603	0.5468	dum=1 if ihsreg=California
D_REGN7	1	0.224936	1.25531284	0.179	0.8579	dum=1 if ihsreg=Nashville
D_REGN8	1	0.265875	0.55760346	0.477	0.6337	dum=1 if ihsreg=Navajo
D_REGN9	1	0.886533	0.52856465	1.677	0.0942	dum=1 if ihsreg=Oklahoma
D_REGN10	1	0.244450	0.54586513	0.448	0.6545	dum=1 if ihsreg-Phoenix
D_REGN11	1	0.876406	0.63612424	1.378	0.1690	dum=1 if ihsreg=Portland
D_LOC2	1	-0.569317	0.50376032	-1.130	0.2590	metro area: 250K • 1 million
D_LOC3	1	0.412498	0.54334232	0.759	0.4482	metro area: <250K
D_LOC4	1	-0.747507	0.74856920	-0.999	0.31%	non-metro/urban; 20K+; adj to metro
D_LOC5	1	0.001819	0.42530955	0.004	0.9966	non-metro/urban; 20K+; not adj to metro
D_LOC6	1	-0.044184	0.62434036	-0.071	0.9436	non-metro/urban; 2.5-20K; adj to metro
D_LOC7	1	-0.027101	0.44549964	-0.061	0.9515	non-metro/urban; 2.5-20K; not adj metro
D_LOC8	1	-0.332851	0.57886382	-0.575	0.5656	rural or <2.5K urban
YRSTOGO	1	0.147812	0.09403806	1.572	0.1167	Obligation Remaining(in Years)
LSAL_YRV	1	0.720502	0.71492094	1.008	0.3141	log(natural) of revised amual salary
SATIS14	1	-0.134805	0.08730186	-1.544	0.1233	Satis with patient care hrs
SATIS15	1	0.231947	0.08039137	2.885	0.0041	Satis with Admin Support
SATIS16	1	0.040786	0.05229636	0.780	0.4359	Satis with # Red Support Sf
SATIS17	1	0.056277	0.10446540	0.539	0.5904	Satis with Qualty Med Sp Sf
SATIS18	1	-0.008786	0.08101614	-0.108	0.9137	Satis with IHS Phys Fclties
SATIS19	1	-0.003371	0.08871283	-0.038	0.9697	Satis with Referrl Services
SATIS20	1	-0.185100	0.13165304	-1.4%	0.1605	Satis with Quality of Care
SATIS21	1	0.076136	0.08332433	0.914	0.3614	Satis uith CUE Opportunties

Table 4.15
Plamed Tenure and Satisfaction uith 17 Aspects of IHS

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
SATIS22	1	0.054065	0.09539848	0.567	0.5712	Satis with Career Dev Oppor
SATIS23	1	0.145346	0.10304759	1.410	0.1591	Satis uith Reltns Ntve Amer
SATIS24	1	-0.085801	0.12626837	-0.680	0.4972	Satis with Annual Compnsatn
SATIS25	1	0.277950	0.13137937	2.023	0.0437	Satis with Future IHS Compn
SATIS27	1	-0.023609	0.12443649	-0.190	0.84%	Satis with loan Repay Progm
SATIS28	1	-0.164905	0.00232893	-1.786	0.0748	Satis with Housing Benefits
SATIS29	1	0.074987	0.09498432	0.789	0.4303	Satis with Local Livng Cond
SATIS31	1	0.022886	0.07482444	0.306	0.7599	Satis with Job Oppor Spouse
SATIS34	1	0.231586	0.09638202	2.403	0.0167	Satis with Impact on Family

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Model: ASP03
Dependent Variable: STAY_YRS No. Years Plan to Stay in IHS

Analysis of Variance

Source	DF	slml of Squares	Mean Square	F Value	Prob>F
Model	79	919.51654	11.63945	4.558	0.0001
Error	414	1057.27901	2.55381		
C Total	493	1976.79555			

Root MSE	1.59807	R-square	0.4652
Dep Mean	4.06680	Adj R-sq	0.3631
C.V.	39.29539		

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
INTERCEP	1	-8.011158	7.59592530	-1.055	0.2922	Intercept
D_GDR	1	-0.151934	0.19344114	-0.785	0.4327	dum=1 if Gender=Female
D_RACE1	1	-0.311758	0.40229529	-0.775	0.4388	dum=1 if white Hispanic
D_RACE2	1	-0.413324	0.39682449	-1.042	0.2982	dum=1 if Black
D_RACE3	1	0.420492	0.31027792	1.136	0.2568	dum=1 if Native American
D_RACE4	1	-0.352806	0.34380289	-1.026	0.3054	dum=1 if Other
D_MARST1	1	0.193309	0.32879247	0.588	0.5569	dum=1 if Never Married
D_MARST2	1	0.356914	0.27474752	1.299	0.1946	dum=1 if Other
D_PRE	1	-0.373069	0.18711374	-1.994	0.0468	dum=1 if Nave Pre-School Kids
D_SCH	1	0.480668	0.18540385	2.593	0.0099	dum=1 if Have School-age Kids
D_SCHL1	1	-0.185118	0.17249217	-1.073	0.2838	dum=1 if U.S./Canadian Private
D_SCHL2	1	0.087776	0.39012195	0.225	0.8221	dum=1 if Foreign
D_SCHL3	1	-0.475664	0.31186122	-1.525	0.1280	dum=1 if U.S. Osteopathic
D_ACTV1	1	0.491289	0.29264203	1.679	0.0939	dum=1 if Clinical, Excluding Gov
D_ACTV2	1	0.285561	0.23075162	1.238	0.2166	dum=1 if Other Clinical
D_ACTV3	1	-0.021014	0.29274745	-0.072	0.9428	dum=1 if Other
D_EXPR1	1	0.564862	0.25467496	2.218	0.0271	dum=1 if 6 <=exper_yr<=10
D_EXPR2	1	0.168986	0.30483620	0.554	0.5796	dum=1 if 10< exper_yr
D_CERT	1	-0.020036	0.19548121	-0.102	0.9184	dum=1 if Board Cert. in Primary Splty
D_CMNTY1	1	0.164276	0.20809158	0.789	0.4303	dum=1 if Suburban
D_CMNTY2	1	0.002510	0.21194797	0.012	0.9906	dum=1 if Rural
D_SPL	1	0.142804	0.20841713	D-685	0.4936	dum=1 if Specialty=Primary Care
D_EMPL	1	0.163728	0.31325931	0.439	0.6611	dum=1 if Civil Service
D_JOBTL1	1	-0.722266	0.42030612	-1.718	0.0865	dum=1 if Director/Chief
D_JOBTL2	1	-0.704947	0.50445249	-1.397	0.1630	dum=1 if Medical Officer
D_JOBTL3	1	-0.368242	0.41080366	-0.896	0.3706	dum=1 if Clinical Specialty
D_REGN1	1	1.027919	0.60794800	1.691	0.0916	dum=1 if ihsreg=Aberdean
D_REGN2	1	0.688503	0.57128170	1.205	0.2288	dum=1 if ihsreg=Alaska
D_REGN3	1	1.594903	0.53697558	2.970	0.0031	dum=1 if ihsreg=Albuquerque
D_REGN4	1	0.746081	0.65112834	1.147	0.2520	dum=1 if ihsreg=Bemidji
D_REGN5	1	0.588380	0.56982750	1.033	0.3024	dum=1 if ihsreg=Billings
D_REGN6	1	0.598000	0.80570481	0.742	0.4584	dum=1 if ihsreg-California
D_REGN7	1	0.311141	1.17074869	0.266	0.7906	dum=1 if ihsreg=Nashville
D_REGN8		0.627044	0.51658505	1.214	0.2255	dum=1 if ihsreg=Navajo
D_REGN9	1	1.069478	0.49203133	2.174	0.0303	dum=1 if ihsreg=Oklahoma
D_REGN10	1	0.502889	0.51007408	0.986	0.3248	dum=1 if ihsreg=Phoenix
D_REGN11	1	1.299165	D-59667767	2.177	0.0300	dum=1 if ihsreg=Portland
D_LOC2	1	-0.549225	0.47258506	-1.162	0.2458	metro area: 25DK • 1 million
D_LOC3	1	0.045717	0.51712749	0.088	0.9296	metro area: <250K
D_LOC4	1	-0.590039	0.69971123	-0.843	0.3996	non-metro/urban; 20K+; adj to metro
D_LOC5	1	-0.214085	0.40143145	-0.533	0.5941	non-metro/urban; 20K+; not adj to metro
D_LOC6	1	0.001063	0.57807421	0.002	0.9985	non-metro/urban; 2.5-20K; adj to metro
D_LOC7	1	-0.183396	0.42261750	-0.434	0.6645	non-metro/urban; 2.5-20K; not adj metro
D_LOC8	1	-0.131389	0.55006947	-0.239	0.8113	rural or <2.5K urban
YRSTOGO	1	0.152360	0.08795156	1.732	0.0840	obligation Remaining(in Years)
LSAL_YRV	1	0.883810	0.66429411	1.330	0.1841	log(natural) of revised annual salary
SATIS14	1	-0.128482	0.08146245	-1.571	0.1155	Satis uith patient care hrs
SATIS15	1	0.234595	0.07465038	3.143	0.0018	Satis with Admin Support
SATIS16	1	0.036772	0.04895346	0.751	0.4530	Satis uith # wed Support Sf
SATIS17	1	0.052280	0.09716669	0.538	0.5908	Satis with Pualty Med Sp Sf
SATIS18	1	-0.028798	0.07678934	-0.375	0.7078	Satis with IHS Phys Fclties
SATIS19		-0.003290	0.08355086	-0.039	0.9686	Satis with Referrl Services
SATIS20	1	-0.268776	0.12265022	-2.191	0.0290	Satis with Quality of Care
SATIS21	1	0.129981	0.07826570	1.661	0.0975	Satis with CHE Opportunties

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Variable	OF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
SATIS22	1	0.044206	0.08927326	0.4%	0.6207	Satis with Career Oev Oppor
SATIS23	1	0.066533	0.09599887	0.693	0.4887	Satis with Reltns Ntve Amer
SATIS24	1	-0.046661	0.12043471	-0.387	0.6986	Satis with Annual Compnsatn
SATIS25	1	0.215603	0.12918752	1.669	0.0959	Satis uith Future IHS Compn
SATIS27	1	-0.011957	0.11506629	-0.104	0.9173	Satis with Loan Repsy Progm
SATIS28	1	-0.089514	0.08837391	-1.013	0.3117	Satis with Housing Benefits
SATIS29	1	0.049870	0.08884567	0.561	0.5749	Satis with Local Livng Cond
SATIS31	1	-0.038366	0.07148391	-0.537	0.5918	Satis with Job Oppor Spouse
SATIS34	1	0.152679	0.09106867	1.677	0.0944	Satis with Impact on Family
IMPRT14	1	0.294897	0.07019619	4.201	0.0001	Import of patient care hrs
IMPRT15	1	-0.188344	0.08474809	-2.222	0.0268	Import of Admin Support
IMPRT16	1	-0.197921	0.09353439	-2.116	0.0349	Import of # Med Support Sf
IMPRT17	1	0.065662	0.10251629	0.641	0.5222	Import of Qualty Med Sp sf
IMPRT18	1	-0.053717	0.09314119	-0.577	0.5644	Import of IHS Phys Fclties
IMPRT19	1	0.047757	0.09484770	0.503	0.6150	Import of Referrl Services
IMPRT20	1	0.250495	0.09464238	2.647	0.0084	Import of Quality of Care
IMPRT21	1	0.002199	0.09076816	0.024	0.9807	Import of CM Opportunties
IMPRT22	1	-0.111662	0.07954076	-1.404	0.1611	Import of Career Dev Oppor
IMPRT23	1	0.149589	0.08384505	1.784	0.0751	Import of Reltns Ntve Amer
IMPRT24	1	0.016564	0.12642477	0.131	0.8958	Import of Annual Compnsatn
IMPRT25	1	0.137979	0.12890323	1.070	0.2851	Import of Future IHS Compn
IMPRT27	1	-0.120349	0.07419620	-1.622	0.1056	Import of Loan Repay Progm
IWPRT28	1	-0.063105	0.07115631	-0.887	0.3757	Import of Housing Benefits
IMPRT29	1	0.157314	0.07401123	2.126	0.0341	Import of Local Livng Cond
IMPRT31	1	0.122467	0.06522693	1.878	0.0611	Import of Job Oppor Spouse
IMPRT34	1	0.079339	0.07305180	1.086	0.2781	Import of Impact on Family

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Model: ASP04
Dependent Variable: STAY_YRS No. Years Plan to Stay in IHS

Analysis of Variance

Source	DF	sun of Squares	Mean Square	F Value	Prob>F
Model	80	984.63149	12.30709	5.123	0.0001
Error	413	992.16405	2.40233		
C Total	493	1976.79555			

Root WE	1.54995	R-square	0.4981
Dep Mean	4.06680	Adj R-sq	0.4009
C.V.	38.11217		

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Parameter Estimates

Variable	OF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
INTERCEP	1	-7.340416	7.36833167	-0.996	0.3197	Intercept
D_GDR	1	-0.114558	0.18775376	-0.610	0.5421	dum=1 if Gender=Female
D_RACE1	1	-0.113464	0.39203638	-0.289	0.7724	dum=1 if White Hispanic
D_RACE2	1	-0.277959	0.38575300	-0.721	0.4716	dum=1 if Black
D_RACE3	1	0.539553	0.35985592	1.499	0.1345	dum=1 if Native American
D_RACE4	1	-0.255021	0.33397923	-0.764	0.4456	dum=1 if Other
D_MARST1	1	0.259797	0.31914785	0.814	0.4161	dum=1 if Never Married
D_MARST2	1	0.178779	0.26866231	0.665	0.5061	dum=1 if Other
D_PRE	1	-0.371697	0.18147977	-2.048	0.8412	dum=1 if Have Pre-School Kids
D_SCH	1	0.435048	0.18003454	2.416	0.0161	dum=1 if Have School-age Kids
D_SCHL1	1	-0.173821	0.16731235	-1.039	0.2995	dum=1 if U.S./Canadian Private
D_SCHL2	1	0.074336	0.37838384	0.1%	0.8444	dum=1 if Foreign
D_SCHL3	1	-0.449239	0.30251338	-1.485	0.1383	dum=1 if U.S. Cktecpathic
D_ACTV1	1	0.604227	0.28465810	2.123	0.0344	dum=1 if Clinical, Excluding Gov
D_ACTV2	1	0.345668	0.22410108	1.542	0.1237	dum=1 if Other Clinical
D_ACTV3	1	-0.018249	0.28393306	-0.064	0.9488	dum=1 if Other
D_EXPR1	1	0.576462	0.24701652	2.334	0.0201	dum=1 if 6 <=exper_yr<=10
D_EXPR2	1	0.332388	0.29731855	1.118	0.2642	dum=1 if 10< exper_yr
D_CERT	1	-0.030637	0.18960603	-0.162	0.8717	dum=1 if Board Cert. in Primary Splty
D_CMNTY1	1	0.128193	0.20194473	0.635	0.5259	dum=1 if Suburban
D_CMNTY2	1	-0.022950	0.20562419	-0.112	0.9112	dum=1 if Rural
D_SPL	1	0.142240	0.20214154	0.704	0.4820	dum=1 if Specialty=Primary Care
D_EMPL	1	0.158873	0.36202135	0.439	0.6610	dum=1 if Civil Service
D_JOBTL1	1	-0.774186	0.40777229	-1.899	0.0583	dum=1 if Director/Chief
D_JOBTL2	1	-0.752115	0.48934685	-1.537	0.1251	dum=1 if Medical Officer
D_JOBTL3	1	-0.367412	0.39843403	-0.922	0.3570	dum=1 if Clinical Specialty
D_REGN1	1	0.825050	0.59092829	1.396	0.1634	dum=1 if ihsreg=Aberdean
D_REGN2	1	0.607424	0.55429871	1.096	0.2738	dum=1 if ihsreg=Alaska
D_REGN3	1	1.714472	0.52131291	3.289	0.0011	dum=1 if ihsreg=Albuquerque
D_REGN4	1	0.627690	0.63193713	0.993	0.3212	dum=1 if ihsreg=Bemidji
D_REGN5	1	0.607671	0.55268191	1.099	0.2722	dum=1 if ihsreg=Billings
D_REGN6	1	0.464993	0.78186183	0.5%	0.5524	dum=1 if ihsreg=California
D_REGN7	1	0.536640	1.13632219	0.472	0.6370	dum=1 if ihsreg=Nashville
D_REGN8	1	0.427932	0.50248777	0.852	0.3949	dum=1 if ihsreg=Navajo
D_REGN9	1	0.957964	0.47769628	2.005	0.0456	dum=1 if ihsreg=Oklahoma
D_REGN10	1	0.435686	0.49488367	0.880	0.3792	dum=1 if ihsreg=Phoenix
D_REGN11	1	1.289731	0.57871401	2.229	0.0264	dum=1 if ihsreg=Portland
D_LOC2	1	-0.519779	0.45839000	-1.134	0.2575	metro area: 250K - 1 million
D_LOC3	1	0.109255	0.50170479	0.218	0.8277	metro area: <250K
D_LOC4	1	-0.761458	0.67944056	-1.121	0.2631	non-metro/urban; 20K+; adj to metro
D_LOC5	1	-0.093890	0.39002787	-0.241	0.8099	non-metro/urban; 20K+; not adj to metro
D_LOC6	1	0.136435	0.56127050	0.243	0.8081	non-metro/urban; 2.5-20K; adj to metro
D_LOC7	1	-0.105856	0.41016261	-0.258	0.7965	non-metro/urban; 2.5-20K; not adj metro
D_LOC8	1	-0.165489	0.53354659	-0.310	0.7566	rural or <2.5K urban
YRSTOGO	1	0.156011	0.0853061s	1.829	0.0681	Obligation Remaining(in Years)
LSAL_YRV	1	0.744827	0.64484444	1.155	0.2487	log(natural) of revised amual salary
SATIS14	1	-0.126658	0.07901032	-1.603	0.1097	Satis with patient care hrs
SATIS15	1	0.182674	0.07308621	2.499	0.0128	Satis with Admin Support
SATIS16	1	0.041096	0.04748669	0.865	0.3873	Satis with # Med Support Sf
SATIS17	1	0.033537	0.09430965	0.356	0.7223	Satis uith Qualty Med Sp Sf
SATIS18	1	-0.045791	0.07454863	-0.614	0.5394	Satis uith IHS Phys Fclties
SATIS19	1	0.025873	0.08122845	0.319	0.7503	Satis with Referrl Services
SATIS20	1	-0.276947	0.11896747	-2.328	0.0204	Satis with Quality of Care
SATIS21	1	0.140994	0.07593852	1.857	0.0641	Satis with CME Opportunties

Table 4.15
Plamed Tenure and Satisfaction with 17 Aspects of IHS

Variable	OF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable label
SATIS22	1	-0.018916	0.08742992	-0.216	0.8288	Satis with Career Dev Oppor
SATIS23	1	0.018216	0.09356966	0.1%	0.8457	Satis with Reltns Ntve Amer
SATIS24	1	-0.111337	0.11746703	-0.948	0.3438	Satis with Annual Compnsatn
SATIS25	1	0.243228	0.12540988	1.939	0.0531	Satis with Future IHS Compn
SATIS27	1	-0.020775	0.11161440	-0.186	0.8524	Satis with Loan Repay Props
SATIS28	1	-0.057906	0.08592765	-0.674	0.5008	Satis with Housing Benefits
SATIS29	1	0.064822	0.08621830	0.752	0.4526	Satis with Local Livng Cond
SATIS31	1	-0.055363	0.06940829	-0.798	0.4255	Satis with Job Oppor Spouse
SATIS34	1	0.057330	0.09020527	0.636	0.5254	Satis with Impact on Family
IMPRT14	1	0.269563	0.06825620	3.949	0.0001	Import of patient care hrs
IMPRT15	1	-0.134353	0.08284788	-1.622	0.1056	Import of Admin Support
IMPRT16	1	-0.159110	0.09102377	-1.748	0.0812	Import of # Med Support Sf
IMPRT17	1	0.047588	0.09949003	0.478	0.6327	Import of Qualty Med Sp Sf
IMPRT18	1	-0.054543	0.09033677	-0.604	0.5463	Import of IHS Phys Fclties
IMPRT19	1	0.071688	0.09210671	0.778	0.4368	Import of Referrl Services
IMPRT20	1	0.216670	0.09202225	2.355	0.0190	Import of Quality of Care
IMPRT21	1	-0.014707	0.08809491	-0.167	0.8675	Import of CME Opportunties
IMPRT22	1	-0.094893	0.07721293	-1.229	0.2198	Import of Career Dev Oppor
IMPRT23	1	0.113821	0.08161009	1.3%	0.1639	Import of Reltns Ntve Amer
IMPRT24	1	0.018344	0.12261849	0.150	0.8812	Import of Annual Compnsatn
IMPRT25	1	0.140279	0.12502262	1.122	0.2625	Import of Future IHS Compn
IMPRT27	1	-0.107545	0.07200410	-1.494	0.1360	Import of Loan Repay Progm
IMPRT28	1	-0.057444	0.06902229	-0.832	0.4057	Import of Housing Benefits
IMPRT29	1	0.132266	0.07194373	1.838	0.0667	Import of Local Livng Cond
IMPRT31	1	0.092978	0.06351593	1.464	0.1440	Import of Job Oppor Spouse
IMPRT34	1	0.117329	0.07122692	1.647	0.1003	Import of Impact on Family
D_CHOOSE	1	1.207615	0.23195555	5.206	0.0001	dum=1 if would choose IHS again

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Model: ASP05
Dependent Variabte: STAY_YRS No. Years Plan to Stay in IHS

Analysis of Variance

Source	DF	Sum of Squares	lean Square	F Value	Prob>F
Model	62	796.31392	12.84377	4.689	0.0001
Error	431	1180.48162	2.73894		
C Total	493	1976.79555			

Root MSE	1.65497	R-square	0.4028
Dep Wean	4.06680	Adj R-sq	0.3169
C.V.	40.69471		

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
INTERCEP	1	1.227164	7.64834150	0.160	0.8726	Intercept
D_GDR	1	-0.128028	0.19408836	-0.660	0.5098	dum=1 if Gender=Female
D_RACE1	1	-0.071514	0.41004242	-0.174	0.8616	dum=1 if White Hispanic
D_RACE2	1	-0.304809	0.40032373	-0.761	0.4468	dum=1 if Black
D_RACE3	1	0.512746	0.37632973	1.362	0.1138	dum=1 if Native American
D_RACE4	1	-0.131220	0.34967061	-0.375	0.7076	dum=1 if Other
D_MARST1	1	-0.191850	0.28771383	-0.667	0.5053	dum=1 if Never Married
D_MARST2	1	0.153321	0.26140000	0.587	0.5578	dum=1 if Other
D_PRE	1	-0.351327	0.18967569	-1.852	0.0647	dum=1 if Have Pre-School Kids
D_SCH	1	0.545272	0.18645535	2.924	0.0036	dum=1 if Have School-age Kids
D_SCHL1	1	-0.337098	0.17640815	-1.911	0.0567	dum=1 if U.S./Canadian Private
D_SCHL2	1	-0.0593%	0.39570645	-0.150	0.8808	dum=1 if Foreign
D_SCHL3	1	-0.369541	0.31135314	-1.187	0.2359	dum=1 if U.S. Osteopathic
D_ACTV1	1	0.539461	0.29231058	1.846	0.0656	dum=1 if Clinical, Excluding Gov
D_ACTV2	1	0.438645	0.22962454	1.910	0.0568	dum=1 if Other Clinical
D_ACTV3	1	-0.059506	0.29775157	-0.200	0.8417	dum=1 if Other
D_EXPR1	1	0.792255	0.25588960	3.096	0.0021	dum=1 if 6 <=exper_yr<=10
D_EXPR2	1	0.301728	0.30448257	0.991	0.3223	dum=1 if 10< exper_yr
D_CERT	1	0.107238	0.19684187	0.545	0.5862	dum=1 if Board Cert. in Primary Splty
D_CMNTY1	1	0.158658	0.20945170	0.757	0.4492	dum=1 if Suburban
D_CMNTY2	1	-0.063797	0.21535137	-0.203	0.8389	dum=1 if Rural
D_SPL	1	0.077550	0.20746193	0.374	0.7087	dum=1 if Specialty=Primary Care
D_EMPL	1	-0.117747	0.37066369	-0.318	0.7509	dum=1 if Civil Service
D_JOBTL1	1	-0.676376	0.43035849	-1.572	0.1168	dum=1 if Director/Chief
D_JOBTL2	1	-0.718630	0.51337468	-1.400	0.1623	dum=1 if Medical Officer
D_JOBTL3	1	-0.299364	0.41982361	-0.713	0.4762	dum=1 if Clinical Specialty
D_REGN1	1	1.034226	0.61473129	1.682	0.0932	dum=1 if ihsreg=Aberdean
D_REGN2	1	0.180215	0.57258027	0.315	0.7531	dum=1 if ihsreg=Alaska
D_REGN3	1	1.2676%	0.54641227	2.320	0.0208	dum=1 if ihsreg=Albuquerque
D_REGN4	1	0.515505	0.65406212	0.788	0.4310	dum=1 if ihsreg=Bemidji
D_REGN5	1	0.423648	0.57941305	0.731	0.4651	dum=1 if ihsreg=Billings
D_REGN6	1	0.113124	0.80893266	0.140	0.8888	dum=1 if ihsreg=California
D_REGN7	1	0.459657	1.18565426	0.388	0.6984	dum=1 if ihsreg=Nashville
D_REGN8	1	0.259565	0.52553866	0.494	0.6216	dum=1 if ihsreg=Navajo
D_REGN9	1	0.809819	0.49435794	1.638	0.1021	dum=1 if ihsreg=Oklahoma
D_REGN10	1	0.147635	0.51135534	0.289	0.7729	dum=1 if ihsreg=Phoenix
D_REGN11	1	0.742802	0.60205656	1.234	0.2180	dum=1 if ihsreg=Portland
D_LOC2	1	-0.641066	0.47406582	-1.352	0.1770	metro area: 250K • 1 million
D_LOC3	1	0.185459	0.50606160	0.366	0.7142	metro area: <250K
D_LOC4	1	-0.616057	0.70185017	-0.878	0.3806	non-metro/urban; 20K+; adj to metro
D_LOC5	1	-0.147263	0.39972148	-0.368	0.7127	non-metro/urban; 20K+; not adj to metro
D_LOC6	1	-0.157552	0.58240772	-0.271	0.7869	non-metro/urban; 2.5-20K; adj to metro
D_LOC7	1	-0.220417	0.41302033	-0.534	0.5938	non-metro/urban; 2.5-20K; not adj metro
D_LOC8	1	-0.549135	0.54032086	-1.016	0.3101	rural or <2.5K urban
YRSTOGD	1	0.155132	0.08956728	1.732	0.0840	Obligation Remaining(in Years)
LSAL_YRV	1	0.214045	0.66912634	0.320	0.7492	log(natural) of revised annual salary
RATE14	1	-0.004233	0.02595334	-0.163	0.8105	Rating of patient care hrs
RATE15	1	0.061277	0.02332747	2.627	0.0089	Rating of Admin Support
RATE16	1	0.006632	0.01681445	0.394	0.6934	Rating of #Med Support Sf
RATE17	1	0.011987	0.02955115	0.406	0.6852	Rating of Qualty Med Sp Sf
RATE18	1	0.008298	0.02763787	0.300	0.7641	Rating of IHS Phys Fclties
RATE19		0.019737	0.02912091	0.678	0.4983	Rating of Referrl Services
RATE20	1	-0.003810	0.03385885	-0.113	0.9105	Rating of Quality of Care
RATE21	1	0.059861	0.02804643	2.134	0.0334	Rating of CME Opportunties

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
RATE22	1	0.020915	0.02929819	0.714	0.4757	Rating of Career Dev Oppor
RATE23	1	0.076992	0.02811808	2.738	0.0064	Rating of Reltns Ntve Amer
RATE24	1	-0.012122	0.03843255	-0.315	0.7526	Rating of Annual Compnsatn
RATE25	1	0.089841	0.04225906	2.126	0.0341	Rating of Future IHS Compn
RATE27	1	-0.006607	0.03919503	-0.169	0.8662	Rating of Loan Repay Progm
RATE28	1	-0.038358	0.03555076	-1.079	0.2812	Rating of Housing Benefits
RATE29	1	0.053573	0.02716801	1.972	0.0493	Rating of Local Livng Cond
RATE31	1	0.019521	0.02232003	0.875	0.3823	Rating of Job Oppor Spouse
RATE34	1	0.030814	0.02732830	1.128	0.2601	Rating of Impact on Family

Table 4.15
Plsnnad Tenure and Satisfaction with 17 Aspects of IHS

Model: ASP06
Dependent Variable: STAY_YRS No. Years Plan to Stay in INS

Analysis of Variance

Source	DF	sun of Squares	Mean Square	F Value	Prob>F
Model	63	852.98925	13.53951	5.181	0.0001
Error	430	1123.80630	2.61350		
C Total'	493	1976.79555			

Root MSE	1.61663	R-square	0.4315
Dep Mean	4.06680	Adj R-sq	0.3482
C.V.	39.751%		

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
INTERCEP	1	1.425210	7.47127686	0.191	0.8488	Intercept
D_GDR	1	-0.088338	0.18978348	-0.465	0.6418	dum=1 if Gender=Female
D_RACE1	1	0.0556%	0.40147226	0.139	0.8899	dum=1 if White Hispanic
D_RACE2	1	-0.163315	0.39222828	-0.416	0.6773	dum=1 if Black
D_RACE3	1	0.620457	0.36833841	1.684	0.0928	dum=1 if Native American
D_RACE4	1	-0.034954	0.34219494	-0.102	0.9187	dum=1 if Other
D_MARST1	1	-0.107760	0.28162800	-0.383	0.7022	dum=1 if Never Harried
D_MARST2	1	0.042936	0.25644216	0.167	0.8671	dum=1 if Other
D_PRE	1	-0.339132	0.18530006	-1.830	0.0679	dum=1 if Have Pre-School Kids
D_SCH	1	0.499265	0.18240357	2.737	0.0065	dum=1 if Have School-age Kids
D_SCHL1	1	-0.310930	0.17241298	-1.803	0.0720	dum=1 if U.S./Canadian Private
D_SCHL2	1	-0.037637	0.38656754	-0.097	0.9225	dum=1 if Foreign
D_SCHL3	1	-0.309884	0.30440984	-1.018	0.3093	dum=1 if U.S. Osteopathic
D_ACTV1	1	0.654913	0.28661304	2.285	0.0228	dum=1 if Clinical, Excluding Gov
D_ACTV2	1	0.504744	0.22475359	2.246	0.0252	dum=1 if Other Clinical
D_ACTV3	1	-0.057520	0.29085401	-0.198	0.8433	dum=1 if Other
D_EXPR1	1	0.778015	0.24998023	3.112	0.0020	dum=1 if 6 <=exper_yr<=10
D_EXPR2	1	0.419259	0.29849766	1.405	0.1609	dum=1 if 10< exper_yr
D_CERT	1	0.093289	0.19230506	0.485	0.6278	dum=1 if Board Cert. in Primary Splty
D_CMNTY1	1	0.113324	0.20483089	0.553	0.5804	dum=1 if Suburban
D_CMNTY2	1	-0.084583	0.21054467	-0.402	0.6881	dum=1 if Rural
D_SPL	1	0.089921	0.20267317	0.444	0.6575	dum=1 if Specialty=Primary Care
D_EMPL	1	-0.139842	0.36210778	-0.386	0.6995	dum=1 if Civil Service
D_JOBTL1	1	-0.703225	0.42042810	-1.673	0.0951	dum=1 if Director/Chief
D_JOBTL2	1	-0.736176	0.50149571	-1.468	0.1428	dum=1 if Medical Officer
D_JOBTL3	1	-0.302086	0.41009816	-0.737	0.4618	dum=1 if Clinical Specialty
D_REGN1	1	0.883598	0.60136863	1.469	0.1425	dum=1 if ihsreg=Aberdean
D_REGN2	1	0.126981	0.55943237	0.227	0.8205	dum=1 if ihsreg=Alaska
D_REGN3	1	1.402311	0.53453704	2.623	0.0090	dum=1 if ihsreg=Albuquerque
D_REGN4	1	0.466330	0.63899702	0.730	0.4659	dum=1 if ihsreg=Bemidji
D_REGN5	1	0.485106	0.56614389	0.857	0.3920	dum=1 if ihsreg-Billings
D_REGN6	1	0.053056	0.79029776	0.067	0.9465	dum=1 if ihsreg=California
D_REGN7	1	0.695374	1.15929233	0.600	0.5489	dum=1 if ihsreg=Nashville
D_REGN8	1	0.106886	0.51440964	0.208	0.8355	dum=1 if ihsreg=Navajo
D_REGN9	1	0.721399	0.48327851	1.493	0.1362	dum=1 if ihsreg=Oklahoma
D_REGN10	1	0.118085	0.49954931	0.236	0.8132	dum=1 if ihsreg=Phoenix
D_REGN11	1	0.757731	0.58811772	1.288	0.1983	dum=1 if ihsreg=Portland
D_LOC2	1	-0.615545	0.46311578	-1.329	0.1845	metro area: 250K - 1 million
D_LOC3	1	0.245282	0.49450479	0.4%	0.6201	metro area: <250K
D_LOC4	1	-0.860452	0.68759651	-1.251	0.2115	non-metro/urban; 20K+; adj to metro
D_LOC5	1	-0.061670	0.39089369	-0.158	0.8747	non-metro/urban; 20K+; not adj to metro
D_LOC6	1	-0.051838	0.56936807	-0.091	0.9275	non-metro/urban; 2.5-20K; adj to metro
D_LOC7	1	-0.160519	0.40365706	-0.398	0.6911	non-metro/urban; 2.5-20K; not adj metro
D_LOC8	1	-0.583258	0.52785435	-1.105	0.2698	rural or <2.5K urban
YRSTOGO	1	0.167732	0.08753428	1.916	0.0560	Obligation Remaining(in Years)
LSAL_YRV	1	0.120072	0.65393644	0.184	0.8544	log(natural) of revised annual salary
RATE14	1	-0.006033	0.02535504	-0.238	0.8120	Rating of patient care hrs
RATE15	1	0.047817	0.02296963	2.082	0.0380	Rating of Admin Support
RATE16	1	0.007037	0.01642515	0.428	0.6686	Rating of # Med Support Sf
RATE17	1	0.011615	0.02886667	0.402	0.6876	Rating of Qualty Med Sp Sf
RATE18	1	0.002010	0.02703134	0.074	0.9408	Rating of IHS Phys Fclties
RATE19	1	0.025015	0.02846884	0.879	0.3801	Rating of Referrl Services
RATE20	1	-0.001427	0.03307842	-0.043	0.9656	Rating of Quality of Care
RATE21	1	0.054977	0.02741675	2.005	0.0456	Rating of CME Opportunties

Table 4.15
Planned Tenure and Satisfaction with 17 Aspects of IHS

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
RATE22	1	0.001829	0.02891141	0.063	0.9496	Rating of Career Dev Oppor
RATE23	1	0.057655	0.02777879	2.075	0.0385	Rating of Raltns Ntva Amer
RATE24	1	-0.033607	0.03782464	-0.888	0.3748	Rating of Annual Compnsatn
RATE25	1	0.095665	0.04129901	2.316	0.0210	Rating of Future INS Compn
RATE27	1	-0.014805	0.03832747	-0.306	0.6995	Rating of Loan Repay Progm
RATE28	1	-0.031547	0.034757%	-0.908	0.3646	Rating of Housing Benefits
RATE29	1	0.054095	0.02653886	2.038	0.0421	Rating of Local Livng Cond
RATE31	1	0.013112	0.02184634	0.600	0.5487	Rating of Job Oppor Spouse
RATE34	1	0.011741	0.02700755	0.435	0.6640	Rating of Impact on Family
D_CHOOSE	1	1.099722	0.23615514	4.657	0.0001	dum=1 if would choose INS again

Table 4.16
Planned Tenure and Overall Satisfaction

Model: IOS01
Dependent Variable: STAY_YRS No. Years Plan to Stay in IHS

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	46	762.68686	16.58015	6.023	0.0001
Error	453	1247.06314	2.75290		
C Total	499	2009.75000			

Root MSE	1.65919	R-square	0.3795
Dep Mean	4.05000	Adj R-sq	0.3165
C.V.	40.96756		

Table 4.16
Planned Tenure and Overall Satisfaction

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
INTERCEP	1	-0.512268	7.47392276	-0.069	0.9454	Intercept
D_GDR	1	-0.039819	0.18892849	-0.211	0.8332	dum=1 if Gender=Female
D_RACE1	1	0.018015	0.39802015	0.045	0.9639	dum=1 if White Hispanic
D_RACE2	1	-0.237005	0.38840896	-0.610	0.5420	dum=1 if Black
D_RACE3	1	0.726160	0.36091588	2.012	0.0448	dum=1 if Native American
D_RACE4	1	-0.122151	0.33803037	-0.361	0.7180	dum=1 if Other
D_MARST1	1	-0.194034	0.27759446	-0.699	0.4849	dum=1 if Never Married
D_MARST2	1	0.119435	0.25893682	0.461	0.6448	dum=1 if Other
D_PRE	1	-0.293959	0.18596225	-1.581	0.1146	dum=1 if Have Pre-School Kids
D_SCH	1	0.510693	0.18110923	2.820	0.0050	dum=1 if Nave School-age Kids
D_SCHL1	1	-0.341695	0.17297265	-1.975	0.0488	dum=1 if U.S./Canadian Private
D_SCHL2	1	-0.016511	0.38628169	-0.043	0.9659	dum=1 if Foreign
D_SCHL3	1	-0.341756	0.30491329	-1.121	0.2630	dum=1 if U.S. Osteopathic
D_ACTV1	1	0.712079	0.28394365	2.508	0.0125	dum=1 if Clinical, Excluding Gov
D_ACTV2	1	0.501951	0.22182857	2.263	0.0241	dum=1 if Other Clinical
D_ACTV3	1	0.035787	0.29134593	0.123	0.9023	dum=1 if Other
D_EXPR1	1	0.888643	0.24660020	3.604	0.0003	dum=1 if 6 <=exper_yr<=10
D_EXPR2	1	0.406442	0.29590550	1.374	0.1703	dum=1 if 10< exper_yr
D_CERT	1	0.049571	0.19135247	0.259	0.7957	dum=1 if Board Cert. in Primary Splty
D_CMNTY1	1	0.141487	0.20425849	0.693	0.4889	dum=1 if Suburban
D_CMNTY2	1	-0.003948	0.20887318	-0.019	0.9849	dum=1 if Rural
D_SPL	1	0.128232	0.19771703	0.649	0.5169	dum=1 if Specialty=Primary Care
D_EMPL	1	-0.063614	0.35939153	-0.177	0.8596	dum=1 if Civil Service
D_JOBTL1	1	-0.601699	0.41853292	-1.438	0.1512	dum=1 if Director/Chief
D_JOBTL2	1	-0.740434	0.50119107	-1.477	0.1403	dum=1 if Medical Officer
D_JOBTL3	1	-0.217548	0.40731969	-0.534	0.5935	dum=1 if Clinical Specialty
D_REGN1	1	1.235857	0.59407961	2.080	0.0381	dum=1 if ihsreg=Aberdean
D_REGN2	1	0.382311	0.55398859	0.690	0.4985	dum=1 if ihsreg=Alaska
D_REGN3	1	1.351874	0.52863937	2.557	0.0109	dum=1 if ihsreg=Albuquerque
D_REGN4	1	0.856892	0.62267976	1.376	0.1695	dum=1 if ihsreg=Bemidji
D_REGN5	1	0.647490	0.55682425	1.163	0.2455	dum=1 if ihsreg=Billings
D_REGN6	1	0.478041	0.77390191	0.618	0.5371	dum=1 if ihsreg=California
D_REGN7	1	0.813397	1.14413155	0.711	0.4775	dum=1 if ihsreg=Nashville
D_REGN8	1	0.429136	0.50748088	0.846	0.3982	dum=1 if ihsreg=Navajo
D_REGN9	1	1.081663	0.47630799	2.271	0.0236	dum=1 if ihsreg=Oklahoma
D_REGN10	1	0.323199	0.48314778	0.669	0.5039	dum=1 if ihsreg=Phoenix
D_REGN11	1	0.930558	0.57724242	1.612	0.1076	dum=1 if ihsreg=Portland
D_LOC2	1	-0.558426	0.46142459	-1.210	0.2268	metro area: 250K - 1 million
D_LOC3	1	0.149808	0.49479919	0.303	0.7622	metro area: <250K
D_LOC4	1	-0.571409	0.67857415	-0.842	0.4002	non-metro/urban; 20K+; adj to metro
D_LOC5	1	-0.172139	0.39345249	-0.438	0.6620	non-metro/urban; 20K+; not adj to metro
D_LOC6	1	-0.629514	0.55923389	-1.126	0.2609	non-metro/urban; 2.5-20K; adj to metro
D_LOC7	1	-0.343982	0.40357992	-0.852	0.3945	non-metro/urban; 2.5-20K; not adj metro
D_LOC8	1	-0.591961	0.53150495	-1.114	0.2660	rural or <2.5K urban
YRSTOGO	1	0.190673	0.08626707	2.210	0.0276	Obligation Remaining(in Years)
LSAL_YRV	1	0.341948	0.65501421	0.522	0.6019	log(natural) of revised annual salary
SATISALL	1	0.034885	0.00385277	9.055	0.0001	Respondent Overall Satisfaction

Table 4.16
Planned Tenure and Overall Satisfaction

Model: IOS02
Dependent Variable: STAY_YRS Ho. Years Plan to Stay in IHS

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	46	604.13690	13.13341	4.233	0.0001
Error	453	1405.61310	3.10290		
C Total	499	2009.75000			

Root MSE	1.76150	R-square	0.3006
Dep Mean	4.05000	Adj A-sq	0.2296
C.V.	43.49394		

Table 4.16
Planned Tenure and Overall Satisfaction

Parameter Estimates

Variable	DF	Parameter Estimtc	standard Error	T for HO: Parameter=0	Prob > |T|	Variable Label
INTERCEP	1	-6.533243	7.93668661	-0.823	0.4108	Intercept
D_GDR	1	0.048711	0.20021569	0.243	0.8079	dum=1 if Gender=Female
D_RACE1	1	-0.1515%	0.42212354	-0.359	0.7197	dum=1 if White Hispanic
D_RACE2	1	-0.317747	0.41236241	-0.771	0.4414	dum=1 if Black
D_RACE3	1	0.669288	0.38376753	1.744	0.0818	dum=1 if Native American
D_RACE4	1	0.001124	0.35846191	0.003	0.9975	dum=1 if Other
D_MARST1	1	-0.209894	0.29473331	-0.712	0.4767	dum=1 if Never Married
D_MARST2	1	0.058266	0.27494240	0.212	0.8323	dum=1 if Other
D_PRE	1	-0.319998	0.19756217	-1.620	0.1060	dum=1 if Have Prc-School Kids
D_SCH	1	0.523092	0.19237402	2.719	0.0068	dum=1 if Have School-age Kids
D_SCHL1	1	-0.341175	0.18363950	-1.858	0.0638	dum=1 if U.S./Canadian Private
D_SCHL2	1	0.136628	0.40959941	0.334	0.7389	dum=1 if Foreign
D_SCHL3	1	-0.400044	0.32499654	-1.231	0.21%	dum=1 if U.S. Osteopathic
D_ACTV1	1	0.792549	0.30124360	2.631	0.0088	dum=1 if Clinical, Excluding Gov
D_ACTV2	1	0.617291	0.23500439	2.627	0.0089	dum=1 if Other Clinical
D_ACTV3	1	0.066347	0.30928766	0.215	0.8302	dum=1 if Other
D_EXPR1	1	0.968994	0.26169958	3.703	0.0002	dum=1 if 6 <=exper_yr<=10
D_EXPR2	1	0.396286	0.31438182	1.261	0.2081	dum=1 if 10< exper_yr
D_CERT	1	-0.111229	0.20304531	-0.548	0.5841	dum=1 if Board Cert. in Primary Spity
D_CMNTY1	1	0.175225	0.21684701	0.808	0.4195	dum=1 if Suburban
D_CMNTY2	1	0.048250	0.22169785	0.218	0.8278	dum=1 if Rural
D_SPL	1	0.247627	0.21015155	1.178	0.2393	dum=1 if Specialty=Primary Care
D_EMPL	1	0.072604	0.38132415	0.190	0.8491	dum=1 if Civil Service
D_JOBTL1	1	-0.504353	0.44468176	-1.134	0.2573	dum=1 if Director/Chief
D_JOBTL2	1	-0.720449	0.53230061	-1.353	0.1766	dum=1 if Medical Officer
D_JOBTL3	1	-0.133827	0.43323139	-0.309	0.7575	dum=1 if Clinical Specialty
D_REGN1	1	1.032140	0.63008346	1.638	0.1021	dum=1 if ihsreg=Aberdean
D_REGN2	1	0.287517	0.58800478	0.489	0.6251	dum=1 if ihsreg=Alaska
D_REGN3	1	1.669805	0.55993468	2.982	0.0030	dum=1 if ihsreg=Albuquerque
D_REGN4	1	0.765466	0.66102125	1.158	0.2475	dum=1 if ihsreg=Bemidji
D_REGN5	1	0.656974	0.59179205	1.110	0.2675	dum=1 if ihsreg=Billings
D_REGN6	1	0.623119	0.82165017	0.758	0.4486	dum=1 if ihsreg=California
D_REGN7	1	0.704804	1.21460894	0.580	0.5620	dum=1 if ihsreg=Nashville
D_REGN8	1	0.286611	0.53842332	0.532	0.5948	dum=1 if ihsreg=Navajo
D_REGN9	1	1.106666	0.50567199	2.189	0.0291	dum=1 if ihsreg=Oklahoma
D_REGN10	1	0.217340	0.51344598	0.423	0.6723	dum=1 if ihsreg=Phoenix
D_REGN11	1	0.978573	0.61308468	1.596	0.1112	dum=1 if ihsreg=Portland
D_LOC2	1	-0.671173	0.48977973	-1.370	0.1713	metro area: 250K • 1 million
D_LOC3	1	0.245827	0.52535979	0.468	0.6401	metro area: <250K
D_LOC4	1	-1.106517	0.71674995	-1.544	0.1233	non-metro/urban; 20K+; adj to metro
D_LOC5	1	-0.106085	0.41849907	-0.253	0.8000	non-metro/urban; 20K+; not sdj to metro
D_LOC6	1	-0.577982	0.59371277	-0.974	0.3308	non-metro/urban; 2.5-20K; adj to metro
D_LOC7	1	-0.268841	0.42958420	-0.626	0.5318	non-metro/urban; 2.5-20K; not adj metro
D_LOC8	1	-0.442424	0.56470062	-0.783	0.4338	rural or <2.5K urban
YRSTOGO	1	0.173005	0.09177370	1.885	0.0601	Obligation Remaining(in Years)
LSAL_YRV	1	0.872728	0-69652229	1.253	0.2109	log(natural) of revised annual salary
SATISAL2	1	0.016354	0.00351542	4.652	0.0001	Resp. Overall Satis., using satis vars

Table 4.16
Planned Tenure and Overall Satisfaction

Model: IOS03
Dependent Variable: STAY_YRS No. Years Plan to Stay in IHS

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	46	620.75064	13.49458	4.401	0.0001
Error	453	1388.99936	3.06622		
C Total	499	2009.75000			

Root RSE	1.75106	R-square	0.3089
Dep Mean	4.05000	Adj R-sq	0.2387
C.V.	43.23614		

Table 4.16
Plamad Tenure and Overall Satisfaction

Paramater Estimates

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob > |T|	Variable label
INTERCEP	1	-5.850321	7.88315378	-0.742	0.4584	Intercept
D_GDR	1	0.055302	0.19890529	0.278	0.7811	dum=1 if Gender=Female
D_RACE1	1	-0.166823	0.41919691	-0.3%	0.6908	dum=1 if White Hispanic
D_RACE2	1	-0.210335	0.41125847	-0.511	0.6093	dum=1 if Black
D_RACE3	1	0.619878	0.38062586	1.629	0.1041	dum=1 if Native American
D_RACE4	1	0.025937	0.35618768	0.073	0.9420	dum=1 if Other
D_MARST1	1	-0.211932	0.29296564	-0.723	0.4698	dum=1 if Never Harried
D_MARST2	1	0.095111	0.27369135	0.348	0.7284	dum=1 if Other
D_PRE	1	-0.309665	0.19643670	-1.576	0.11%	dum=1 if Have Pre-School Kids
D_SCH	1	0.524712	0.19122215	2.744	0.0063	dum=1 if Have School-age Kids
D_SCHL1	1	-0.356188	0.18257468	-1.951	0.0517	dum=1 if U.S./Canadian Private
D_SCHL2	1	0.109443	0.40726285	0.269	0.7883	dum=1 if Foreign
D_SCHL3	1	-0.424571	0.32206136	-1.318	0.1881	dum=1 if U.S. Osteopathic
D_ACTV1	1	0.773292	0.29954407	2.582	0.0101	dum=1 if Clinical, Excluding Gov
D_ACTV2	1	0.621037	0.23345723	2.660	0.0081	dum=1 if Other Clinical
D_ACTV3	1	0.095377	0.30742019	0.310	0.7565	dum=1 if Other
D_EXPR1	1	1.013808	0.26036486	3.894	0.0001	dum=1 if 6 <=exper_yr<=10
D_EXPR2	1	0.4604%	0.31322152	1.470	0.1422	dum=1 if 10< exper_yr
D_CERT	1	-0.108476	0.20114654	-0.539	0.5900	dum=1 if Board Cert. in Primary Splty
D_CMNTY1	1	0.127432	0.21567342	0.591	0.5549	dum=1 if Suburban
D_CMNTY2	1	0.011101	0.22076219	0.050	0.9599	dum=1 if Rural
D_SPL	1	0.239151	0.20860098	1.146	0.2522	dum=1 if Specialty=Primary Care
D_EMPL	1	-0.008728	0.38021801	-0.023	0.9817	dum=1 if Civil Service
D_JOBTL1	1	-0.575511	0.44170937	-1.303	0.1933	dum=1 if Director/Chief
D_JOBTL2	1	-0.756713	0.52895684	-1.431	0.1532	dum=1 if Medical Officer
D_JOBTL3	1	-0.190333	0.43004262	-0.443	0.6583	dum=1 if Clinical Specialty
D_REGN1		1.125016	0.62691979	1.795	0.0734	dum=1 if ihsreg=Aberdean
D_REGN2	1	0.284346	0.58450631	0.486	0.6269	dum=1 if ihsreg=Alaska
D_REGN3	1	1.536677	0.55892304	2.749	0.0062	dum=1 if ihsreg=Albuquerque
D_REGN4	1	0.907223	0.65755824	1.380	0.1684	dum=1 if ihsreg=Bemidji
D_REGN5	1	0.753932	0.58745044	1.283	0.2000	dum=1 if ihsreg=Billings
D_REGN6	1	0.652994	0.81685779	0.799	0.4245	dum=1 if ihsreg=California
D_REGN7	1	0.831396	1.20793809	0.688	0.4916	dum=1 if ihsreg=Nashville
D_REGN8	1	0.254593	0.53502486	0.476	0.6344	dum=1 if ihsreg=Navajo
D_REGN9	1	1.042307	0.50291807	2.073	0.0388	dum=1 if ihsreg=Oklahoma
D_REGN10	1	0.196446	0.50978622	0.385	0.7002	dum=1 if ihsreg=Phoenix
D_REGN11	1	1.022518	0.60906933	1.679	0.0939	dum=1 if ihsreg=Portland
D_LOC2	1	-0.587613	0.48774165	-1.205	0.2289	metro area: 250K • 1 million
D_LOC3	1	0.299504	0.52249412	0.573	0.5668	metro area: <250K
D_LOC4	1	-0.836508	0.71821066	-1.165	0.2447	non-metro/urban; 20K+; adj to metro
D_LOC5	1	-0.122425	0.41568840	-0.295	0.7685	non-metro/urban; 20K+; not adj to metro
D_LOC6	1	-0.568578	0.59020318	-0.963	0.3359	non-metro/urban; 2.5-20K; adj to matro
D_LOC7	1	-0.265190	0.42684794	-0.621	0.5347	non-metro/urban; 2.5-20K; not adj metro
D_LOC8	1	-0.544369	0.56091225	-0.971	0.3323	rural or <2.5K urban
YRSTDGD	1	0.173421	0.09114619	1.903	0.0577	Obligation Remaining(in Years)
LSAL_YRV	1	0.785093	0.69267393	1.133	0.2576	log(natural) of revised annual salary
SATISAL3	1	0.301209	0.05762981	5.227	0.0001	overall satisfaction, from logit

4.6 Summary of the Multivariate F'indings

Satisfaction and plans to leave the IHS are related. Analysis of the survey data undertaken by Abt Associates and NACI explored policy options that can best affect the willingness of physicians to extend their stays. The survey responses were used in a multiple regression model of individual plans to leave the IHS. Time until resignation was estimated controlling for personal and professional characteristics of respondents, as well as their rankings of the dimensions reported in Table 3.6. Table 4.17 summarizes the results of that analysis. Plus signs by a particular dimension indicate that higher rankings increase expected tenure in the II-IS holding constant specialty, job title, location, and other characteristics. Only statistically significant effects are shown in the table.

The findings reported in Table 4.17 lead directly to our policy recommendations. The results for satisfaction levels (satisfaction score column) generate recommendations for retention policies. The importance results (importance score column) lead to the recruitment recommendations. To be especially conservative, recommendations were developed only for those findings that were significant both for the satisfaction or importance scale and the composite ratings index. These were the most robust statistical results and will be discussed in Chapter 5. In this section, we present factors that have a statistically positive effect on IHS tenure, but not as strong of an influence.

According to Table 4.17, the importance placed on both quality of care and patient care hours has a positive effect on prolonging tenure in the IHS. However, the composite rating indexes for these two dimensions did not have statistically significant effects on service tenure. On the other hand, CME opportunities and relations with the Native American community both have statistically significant and positive effects on prolonging IHS tenure when the composite ratings index is used. However, satisfaction with and importance placed on these dimensions do not have statistically significant effects on plans to leave the IHS. Thus, these results do not generate recommendations for either retention or recruitment policies.

TABLE 4.17

Impact of Satisfaction and Importance on Planned Tenure

	Dimension	Satisfaction SCOW	Importance Score	Composite Rating
Quality/Adequacy of care	Quality of Care	−	+	ns
	Referral Services	ns	ns	ns
Quality/Adequacy of Staff/Facilities	Administrative Support	+	*	+
	Number of Medical support staff	ns	*	ns
	Quality of Medical support Staff	ns	ns	ns
	IHS Physical Facilities	ns	ns	ns
	Patient Care Hours	ns	+	ns
Education/Career opportunities	CME Opportunities	ns	ns	+
	Career Develop Opportunities	ns	ns	ns
Finances	Annual IHS Compensation	ns	ns	ns
	Future IHS Compensation	+*	ns	+
	Loan Repayment Program	ns	ns	ns
Living Conditions	Native American Relations	ns	ns	+
	Housing Benefits	ns	ns	ns
	Local Living Conditions	ns	+*	+*
Family Impact	Family Impact	ns	ns	ns
	Spousal Job Opportunities	ns	ns	ns

Note: Entries in this table indicate the statistical significance and direction of the effect of increasing satisfaction, importance, or the rating index on plans to leave the MS.

***Statistical significance depended on model specification.**

V. POLICY IMPLICATIONS

5.1 Introduction

The survey collected data on the following four categories of questions: personal experiences and medical practice in the II-IS, as well as future career plans; individual assessments of particular features of the IHS and the importance of these features in a physician's decision to stay with or leave the II-IS; demographic information; and recommendations of changes in the IHS which may extend tenure with the service. The discussion to this point has focused on the implications of these data on physician satisfaction and willingness to extend stays in the IHS. In this chapter, the policy implications of the survey data are presented and discussed.

The multivariate analysis introduced in Section 4.6 related planned tenure in the IHS with a number of variables collected on the survey. Key analytic issues focused on the ratings of 17 aspects of IHS employment. According to our findings, higher levels of expressed satisfaction lead to extended employment in the IHS. Higher satisfaction levels can be created by investing IHS resources into improvements in staff, salary, or other aspects of employment. Consequently, the results for satisfaction levels (satisfaction score column in Table 4.17) generate recommendations for retention policies. We also found that the importance that each physician places on different aspects of employment are more likely to be characteristics of the person not the job -- although the current environment can certainly influence a respondent's value system. Consequently, the results for importance levels (importance score column in Table 4.17) lead to the recruitment recommendations so that the IHS would attract a larger share of employees who would be good matches with the purposes of the IHS. As we discussed above in Section 4.6, recommendations were developed only for those findings that were significant both for the satisfaction or importance scale and the composite ratings index. In addition to recommendations based on a quantitative evaluation of the survey responses, we developed recommendations based on the comments physicians provided to the open-ended question at the end of the survey. Physicians that responded to this question were, on average, less satisfied and likely to leave the IHS sooner. Their concerns focused on salary and support levels to a greater degree than the average respondent. They also identified important issues that may be relevant to only a few physicians. Finally, we include some recommendations based on statistical findings that are suggestive but not as clearly documented by the analyses.

Each of our recommendations would require additional IHS costs associated with implementation. The scope of the present analysis did not include an investigation of the size of the costs associated either with the current high turnover of physicians or the policies that could lower turnover rates. Given this

limitation, recommendations were developed that would most likely reduce turnover and extend tenure of IHS physicians. A full cost-benefit study or a managerial judgement of likely costs and benefits would be needed prior to implementing some or all of these policies.

5.2 Retention Strategies

The multivariate analysis of data from the 1991 Survey of Physicians Employed by the IHS found a number of factors that, if changed, would cause physicians to extend their planned tenure in the MS. These factors were estimated to be effective holding constant all other conditions. Specifically, potential improvements in satisfaction levels could extend tenure holding constant the educational background, primary specialty, and job characteristics of respondents. The quantitative analysis focused on 17 aspects of employment in the JHS. In addition, we examined the effect of longer service obligations on planned tenure. The results of these analyses indicate that the IHS could retain a larger group of physicians by:

- Improving administrative support; and
- Changing physician expectations about future MS compensation.

Although other factors may influence plans to leave the IHS, these two showed consistently positive effects on tenure. It is important to note that annual salary levels do not have significant effects on retention. However, expectations about future compensation do. Offering greater returns to experience in the IHS may change these expectations and improve retention rates. Table 4.17 also indicates that physicians expressing greater satisfaction with the quality of care provided are likely to leave the IHS sooner. This counterintuitive finding is offset by the impact of the importance placed on quality of care in the decision to remain. We conclude that whatever benefits there may to improving the quality of care, it is unlikely to change MS retention of physicians.

Analysis of planned tenure yielded another consistent finding not shown in Table 4.17. Longer service obligations will extend planned tenure. In fact, some physicians stay in the IHS beyond the end of their obligation. An effective strategy to prolonging tenure in the IHS may be to offer an additional educational subsidy plan in return for a longer term of obligated service.

Offsetting the above finding is the lower reported overall satisfaction of physicians who have a current service obligation. The negative impact of dissatisfied physicians on their co-workers may offset the benefits of lower turnover.

The characteristics of the current job can certainly affect plans to leave. Medical Officers are predicted to leave the IHS 7 months sooner than Clinical Specialists and over 3 months sooner than physicians whose titles include the term Director or Chief. It is not surprising to find substantial retention

problems for those physicians who maintain the General Medical Officer title. The subgroup that is most likely to stay are those physicians who have been promoted out of the medical officer ranks, leaving behind those who would leave sooner under any circumstances and an unknown number of individuals who may stay as medical officers if the issues they identified as important would be addressed. The issues of physician "burnout" in these primary care positions is widespread and transcends the IHS. For example, pediatricians in private practice face significant challenges as they age. Their relationships with patients, parents, and referring colleagues all change. For many, career changes are a seriously considered option.

Three IHS regions -- Albuquerque, Portland, and Oklahoma -- had higher potential retention rates than the remaining nine regions, controlling for other job characteristics. The study did not identify the specific activities that led to longer planned tenure in these areas, but the structure of the quantitative analysis held constant the average impact of satisfaction in 17 broadly defined aspects of employment in the IHS. In depth study of these areas could reveal additional strategies for retaining IHS physicians.

5.3 Recruitment Strategies

Retention can be enhanced by selecting physicians whose values are associated with longer tenures. Table 4.17 indicates that the IHS should positively recruit physicians who will appreciate the kind of local living conditions that are available. The study suggests that recruiters should also focus on those who are committed to serve Native American communities, but the evidence here is not as strong. These findings reinforce the conventional wisdom. Finally, recruitment materials should indicate that there are limited administrative support resources available in some IHS facilities and that physicians who require a lot of support have, in the past, planned to leave the IHS because of these limitations.

One important recruitment strategy was identified by respondents to the open-ended question. A number of physicians reported being mislead by recruiters. Inaccurate information may lead some physicians to work for the IHS, but they may leave much sooner than average and their dissatisfaction can have an impact on their co-workers. Misleading information was apparently more common in the descriptions of the loan repayment program. It is unlikely that recruiters are simply misstating program characteristics. Rather, the loan repayment program operations may fall short of their planned levels of service. In either case, it is important to provide potential employees with an accurate picture of the job. Overselling recruits generates benefits only in the very short run. A longer perspective is needed in these personnel issues.

Recruitment strategies can also be based on those personal characteristics that are associated with longer tenure in the IHS. We found no statistically significant results by gender, race, or ethnicity. Controlling for other factors, Native American physicians planned to leave the IHS 6 months later than comparable non-Indian physicians, but the difference was not statistically significant. The small number of active full-time Native American physicians undoubtedly contributes to the lack of statistical significance. The small number of Native American physicians graduating from U.S. medical schools implies a continuing problem for recruiters, but IHS success could be enhanced by early identification of potential candidates and consistent support through the educational process. In short, the IHS should continue with the same techniques currently in place for Indian and non-Indian recruitment.

The presence of pre-school-age children leads to decisions to leave the IHS sooner, but school-age children were associated with longer tenure. This finding may reflect the limited mobility that many parents choose when their children have ongoing school activities. Continuity has considerable value relative to mobility with school-age children.

Type of medical school and activity prior to joining the IHS were not consistent predictors of longer tenure. Some of the analyses suggested that recruiting older physicians with some post-residency experience in the private sector would be effective in prolonging tenure, but the results were sensitive to the type of model estimated Consequently, we conclude that targeted recruitment strategies in these dimensions are not warranted.

5.4 Concluding Remarks

Findings from this study can be compared to those from the 1980 and 1982 surveys. Some common themes can be noted, especially the importance of administrative support in physicians' decisions to leave the IHS. Changing the support levels may be more costly than the physician turnover that better support would ameliorate. In the context of the present study, however, conducting a cost-benefit analysis of this or other retention strategies was not possible. Providing that analysis would require collecting additional information on the resource costs of changing the system, as well as estimating the cost associated with physician turnover. Given the persistence of the administrative support problem, a full cost-benefit study of this issue may be warranted.

Compared to the surveys conducted in the early 1980s, the 1991 Survey of IHS Physicians found that career development and future compensation -- rather than current salary -- were key retention issues. Planning to address these issues can be challenging. Providing clinicians with career development

opportunities and income growth, even when they choose to avoid managerial responsibility, is a challenge for many organizations that employ physicians. In this respect, the IHS is no exception.

The recommendations discussed above are supported by considerable statistical evidence. Presented below are additional recommendations based either on less robust quantitative findings or on qualitative results from the responses to the open-ended question.

- Periodic surveys of IHS physicians indicate a willingness to consider the ideas of those in the field and that willingness is valued.

- The important role of physicians providing patient care under contract to the IHS was beyond the scope of this project. They should be surveyed, particularly in those areas where contract care is the predominant delivery system for the IHS.

- The survey results indicate that continuing medical education opportunities can influence tenure and may be a relatively inexpensive policy option for the IHS.

- Recruiting physicians with some post-residency experience outside the II-IS may be an effective strategy for lengthening tenure.

- Training programs should familiarize new physicians with the administrative procedures used by the IHS and emphasize that all systems, including those in the private sector, have similar administrative issues.

These final recommendations may not have the same statistical support as those presented earlier, but the evidence is suggestive. Further, these ideas were presented by respondents to the open-ended question. Therefore, the emotional presentation of their concern warrants special attention.

The experience gained from surveying physicians can and should be extended to other health professionals. Recruitment and retention of nurses and dentists may not be affected by the same issues identified by the survey of physicians. Adapting the methodology employed in this study to the other professions can provide important information to IHS managers and can -- simply through implementation -- raise overall satisfaction levels for these professionals.

APPENDIX I

SURVEY INSTRUMENT OF INDIAN HEALTH SERVICE (IHS) PHYSICIANS

LETTER FROM EVERETT R. RHOADES, MD

SURVEY INSTRUMENT
OF
INDIAN HEALTH SERVICE (IHS) PHYSICIANS

ID-I-__|__

Survey of
Indian Health Service Physicians

The first few questions are about your experiences and current medical practice in the Indian Health Service (IHS) and your future plans.

1. Which of the following best describes your activities prior to entering the MS?

	PLEASE CIRCLE ONE NUMBER
Graduate Medical Education (Residency/Fellowship)	1
Clinical Practice, excluding government (Federal, State, Local)	2
Other Clinical Practice (e.g., private practice, HMO)	3
Other (Specify)_____	4

2. When did you first enter the IHS?

Month__|__ Year __|__

3. When you first entered the IHS, did you have a service obligation that could be fulfilled by serving in the MS?

Yes	1 GO TO 3a - b
NO	2 GOT04

3a. What was the type of this service obligation?

National Health Service Commissioned Corps (NHSC)	1
Indian Health Service (IHS)	2
Other Service Residency Program	3
Loan Repayment Program	4
Other (Specify)_____	5

3b. What was the period of this obligation in months?

Number of Months _ - I -

3c. What was/is the ending date of your obligation?

Month__|__ Year__|__

IF PERIOD OF OBLIGATION IS NOT YET OVER, PLEASE ANSWER 3d

3d. Do you plan to serve beyond your obligation?

Yes	1
No	2

4. What medical specialties do you currently practice?

Primary Specialty _____

Secondary specialty _____

5. Are you board certified in the primary specialty listed above?

Yes	1	GOT06
No	2	GO TO 5a

5a. Do you plan to take the board certifying exam in your specialty within the next two years?

Yes	1
No	2

6. Are you a member of the Public Health Service Commissioned Corps or a Civil Service employee of the MS?

Public Health Service Commissioned Corps	1
Civil Service Employee	2

7. What do you consider your primary assignment within the Indian Health Service?

Patient Care Provider	1
Clinical -- Administrative	2
General Administrative	3
Other (Specify)_____	4

8. Are you the clinical director of your IHS facility?

Yes	1
No	2

9. At your facility, does the clinical director significantly influence management decisions?

Yes	1
No	2

10. During your most recent complete week in practice, how many hours did you spend:

a.	Seeing patients in an outpatient clinic	_|_Hrs
b.	Seeing hospitalized patients	_|_Hrs
c.	In other patient care activities	_|_Hrs
d.	In non-patient care activities	__|__ Hrs
e.	Total hours all activities (Should equal the sum of **10a. - 10d.**)	_|_Hrs

11. Knowing what you know now, would you choose medicine as a profession again?

Yes	1
No	2

12. Knowing what you know now, would you choose to practice medicine in the **IHS** again?

Yes	1
No	2

13. Do you currently plan to leave the IHS within the next 5 years?

Yes	**1 GO** TO 13a
No	2 GO TO 14a

13a. When do you plan to leave the IHS?

Within 1 Year	**1**
Within 2 Years	2
Within 3 Years	3
More than 3 Years	4

In the next set of questions we want to learn more about what you like and don't like about the Indian Health Service and how important these likes and dislikes are in your decision to remain in or leave the Service. For each pair of items below, please give us first your assessment with each feature of the IHS and, second, how important this feature is to you in your decision to stay with or leave the Indian Health Service.

14a. Which of the following best describes your reaction to the distribution of hours you dedicate to patient care and non-patient care activities in the MS? 5 4 3 2 1 Satisfied Dissatisfied	14b. How important is the distribution of patient care hours in your decision to stay with or leave the IHS? 5 4 3 2 1 Important Not Important
15a. How would you rate the administrative support in your IHS facility? 5 4 3 2 1 Excellent Poor	15b. How important is the administrative support in your decision to stay with or leave the MS? 5 4 3 2 1 Important Not Important
16a. Do you consider the number of medical support staff as adequate or inadequate? 5 1 Adequate Inadequate	16b. How important is the number of medical support staff in your decision to stay with or leave the MS? 5 4 3 2 1 Important Not Important
17a. How would you rate the quality of medical support staff (e.g., nurses, technicians) in your IHS facility? 5 4 3 2 1 Excellent Poor	17b. How important is the quality of medical support staff in your decision to stay with or leave the MS? 5 4 3 2 1 Important Not Important
18a. How would you rate the adequacy of your IHS physical facilities (plant and equipment)? 5 4 3 2 1 Excellent Poor	18b. How important are the physical facilities in your decision to stay with or leave the MS? 5 4 3 2 1 Important Not Important
19a. How would you rate the availability of referral services in the IHS? 5 4 3 2 1 Excellent Poor	20b. How important is the availability of referral services in your decision to stay or leave the MS? 5 4 3 2 1 Important Not Important

20a. How would you rate the quality of care provided at your IHS facility? 5 4 3 2 1 Excellent Poor	20b. How important are quality of care issues in your decision to stay with or leave the IHS? 5 4 3 2 1 Important Not Important
21a. How would you rate Continuing Medical Education (CME) opportunities in the IHS? 5 4 3 2 1 Excellent Poor	21b. How important are CME opportunities in your decision to stay with or leave the IHS? 5 4 3 2 1 Important Not Important
22a. How would you rate IHS opportunities for career development? 5 4 3 2 1 Excellent Poor	22b. How important are career development opportunities in your decision to stay with or leave the II-IS? 5 4 3 2 1 Important Not Important
23a. How would you rate the nature of your relations with the Native American Community? 5 4 3 2 1 Excellent Poor	23b. How important are your relations with the Native American Community in your decision to stay with or leave the MS? 5 4 3 2 1 Important Not Important
24a. How would you rate your current annual compensation (salary and bonus) in the IHS? 5 4 3 2 1 Satisfied Dissatisfied	24b How important is your current annual compensation in your decision to stay with or leave the MS? 5 4 3 2 1 Important Not Important
25a. How would you rate your expected future compensation in the IHS? 5 4 3 2 1 Satisfied Dissatisfied	25b. How important is your expected future compensation in your decision to stay with or leave the MS? 5 4 3 2 1 Important Not Important

26. Have you ever participated in the MS loan repayment program?

Yes	1 GO TO 26a
No	2 GO TO 28a

26a. What is that maximum amount that could have been repaid?

$\_\_|\_\_|,|\_\_|\_\_|\_\_$

27a.	How would you rate your reaction to the loan repayment program? 5 4 3 2 1 Satisfied Dissatisfied	27b.	How important is your evaluation of the loan repayment program in your decision to stay with or leave the IHS? 5 4 3 2 1 Important Not Important
28a.	How would you rate MS housing benefits? 5 4 3 2 1 Excellent Poor	28b.	How important are housing benefits in your decision to stay with or leave the MS? 5 4 3 2 1 Important Not Important
29a.	How would you rate your local living conditions? 5 4 3 2 1 Excellent Poor	29b.	How important are your living conditions in your decision to stay with or leave the MS? 5 4 3 2 1 Important Not Important

30. What is your current marital status?

Currently Married	1 GOT0 31a
Living with Someone as if You Were Married	2 GO TO 31a
Separated	3 GOT032
Divorced	4 GOT032
Widowed	5 GOT032
Never Married	6 GOT032

31a. How would you rate employment opportunities for your **spouse/partner** in the area where you now live?

5 **4** 3 2 1

Excellent Poor

Please explain:

31b. How important are employment opportunities for your spouse/partner in your decision to **stay** with or leave the IHS?

5 4 3 2 1

Important Not Important

32. How many children do you have in the following age groups who reside with you?

None who reside with you	**1** GOT033
O-2 Years Old	__|__
3-5 Years Old	__|__
6-13 Years Old	__|__
14-18 Years Old	- | -
19 Years Old or Older	- | -

33. Do you have other dependents who live with you?

Yes	**1 GO TO** 33a
No	2 GOT034

33a. In addition to children counted in question 32, how many dependents live with you?

Number of Dependents - | -

34a. How would you rate the impact of your service in the **IHS** on your family members?

5 4 3 2 **1**

Positive Negative

34b. How important is the impact of your service **in** the **IHS** on your family members in your decision to stay with or leave the IHS?

5 4 3 2 1

Important Not Important

The following demographic information will be used only for analysis purposes.

35. What is your sex?

Male	1
Female	2

---

36. Which of these groups best describes your ethnic origin?

White, **Not of Hispanic Origin**	1
White, of Hispanic Origin	2
Black, Not of Hispanic Origin	3
Black, of Hispanic Origin	4
Asian, Asian American, Pacific Islander	5
American Indian, Alaskan Native	6
Other, (SPECIFY) _____	7

---

37. In what year were you born?

19 ___|___

---

38. **What** medical school did you attend (if more than one, please list the school of graduation)?

_____
Medical School

_____
City, State/Country

---

39. In what year did you graduate from medical school?

19___|___

40. How would you describe the community you lived in when you were 16 years old? Would you say it was urban, suburban, or rural (a small town or farm)?

Urban	1
Suburban	2
Rural	3

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41. As a final question, is there anything that could be changed about the Indian Health Service or your assignment in the II-IS that would make you more likely to extend your tenure with the service?

Thank you for completing this questionnaire.

LETTER FROM EVERETT R. RHOADES, MD

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Indian Health Service
Rockville MD 20857

OCT 25 1991

TO: All Indian Health Service Physicians

FROM: Director

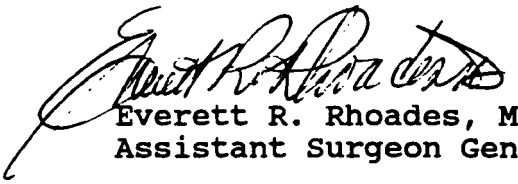
SUBJECT: Survey of Indian Health Service Physicians

The Indian Health Service (IHS) has the primary responsibility for the medical care and treatment of many Native Americans throughout this nation. Therefore, your role as an IHS physician is critical in ensuring that this important group of Americans receive quality health care.

In order to know more about your role, the IHS is conducting its first national survey of IHS physicians since 1982. All IHS physicians are requested to participate in this important research project, which will help IHS to learn more about the reasons physicians stay or leave the IHS, and what can be done to enhance their recruitment and retention. In order to ensure confidentiality and objectivity, this survey will be conducted by Native American Consultants, Inc. (NACI), an independent contractor. A summary of the information you provide, and the analyses that follows, will be used by the IHS in its congressional hearings slated for early 1992, as well as in its strategic planning for improving physicians' experiences within the IHS. Under no circumstances will individual respondent information be disclosed by NACI or its staff or subcontractors. to any IHS staff or other government official without written permission from the individual respondent.

The attached survey form will take 15-20 minutes of your time to complete. Please give this survey your careful attention and return it to NACI no later than November 29, 1991. A pre-addressed envelope is provided for your convenience: return your sealed envelope to your servicing mail room.

Should you have any questions concerning the survey instrument, feel free to call Mr. Jim Millette, NACI, Project Director, on l-800-347-0576 (toll free). Mr. Leo J. Nolan, Director, Division of Program Evaluation and Policy Analysis, is the IHS Project Officer. Mr. Nolan may be reached on (301) 443-4700 or FTS 443-4700. Your participation in this important research project is greatly appreciated.



Everett R. Rhoades, M.D.
Assistant Surgeon General

Attachment

APPENDIX II

FREQUENCIES OF SURVEY RESPONSES

Survey of
Indian Health Service Physicians

1. **Which** of the following beat describes your activities prior to entering the MS?

Activities Prior to Entering IHS

Q1	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	5	0.8	5	0.8
Grad Med Educ	414	63.8	419	64.6
Clinicl,Excl Gov	59	9.1	478	73.7
Other Clinical	112	17.3	590	90.9
Other	59	9.1	649	100.0

2. When did you **first** enter the MS?

IHS years of experience

EXPER_YR	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Hissing	8	1.2	8	1.2
0-5 yrs	396	61.0	404	62.2
6-10 yrs	106	16.3	510	78.6
>10 yrs	139	21.4	649	100.0

3. **When you first** entered the MS, did you have a service obligation that could be **fulfilled** by **serving** in **the IHS?**

Did Have Service Obligation to Fulfill?

a3	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	5	0.8	5	0.8
Yes	251	38.7	256	39.4
No	393	60.6	649	100.0

3a. What was the type of thii service obligation?

Type of Service Obligation

Q3A	Frequency	Percent	Cumulative Frequency	Cunulative Percent
Blank	5	0.8	5	0.8
Does Not Apply	393	60.6	398	61.3
Missing	2	0.3	400	61.6
NHSC	137	21.1	537	82.7
IHS	46	7.1	583	89.8
Other Serv Res	3	0.5	586	90.3
Loan Repay	30	4.6	616	94.9
Other	33	5.1	649	100.0

3b. What was the period of this obiigation in months?

Period of Obligation(in months)

Q3B	Frequency	Percent	Cunulative Frequency	Cunulative Percent
Blank.	5	0.8	5	0.8
Does Not Apply	393	60.6	398	61.3
12	4	0.6	402	61.9
24	91	14.0	493	76.0
28	1	0.2	4 %	76.1
36	71	10.9	565	87.1
38	1	0.2	566	87.2
41	1	0.2	567	87.4
48	67	10.3	634	97.7
60	1	0.2	635	97.8
84	10	1.5	645	99.4
87	1	0.2	646	99.5
94	1	0.2	647	99.7
96	1	0.2	648	99.8
156	1	0.2	649	100.0

3c. What was/is the ending date of your obligation?

Q3CYY	Frequency	Percent	Cumulative Frequency	Cunutative Percent
Blank	5	0.8	5	0.8
Does Not Apply	393	60.6	398	61.3
Missing	5	0.8	403	62.1
1961 - 1970	11	1.7	414	63.8
1971 - 1980	19	2.9	433	66.7
1981 - 1985	31	4.8	464	71.5
1986 - 1990	57	8.8	521	80.3
1991	27	4.2	548	84.4
1992 - 1995	95	14.6	643	99.1
1996 - 2000	5	0.8	648	99.8
>2000	1	0.2	649	100.0

3d. Do you plan to serve beyond your obligation?

Plan to Serve Beyond Period of Obligatn?

Q3D	Frequency	Percent	Cumulative Frequency	Cunulative Percent
Blank	10	1.5	10	1.5
Does Not Apply	537	82.7	547	84.3
Missing	17	2.6	564	86.9
Yes	41	6.3	605	93.2
No	44	6.8	649	100.0

4. **What medical specialties do** you **currently** practice?

specialty group(13 values)

GEN_SPL	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MISSING	9	1.4	9	1.4
GEN/FAM PRACTICE	292	45.0	301	46.4
INTERNAL MED	80	12.3	381	58.7
MED SUBSPECIAL	7	1.1	388	59.8
PEDIATRICS	85	13.1	473	72.9
GENERAL SURGERY	23	3.5	496	76.4
SURG SUBSPECIAL	27	4.2	523	80.6
OB/GYN	48	7.4	571	88.0
RADIOLOGY	13	2.0	584	90.0
PSYCHIATRY	25	3.9	609	93.8
ANESTHESIOLOGY	8	1.2	617	95.1
PATHOLOGY	4	0.6	621	95.7
EMERGENCY MED	10	1.5	631	97.2
OTHER	18	2.8	649	100.0

5. Are you board certified in the primary specialty listed above?

Board Certified in Primary Specialty?

Q5	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	12	1.8	12	1.8
Yes	440	67.8	452	69.6
No	197	30.4	649	100.0

5a. Do you plan to take the board certifying exam in your specialty within the next two years?

Plan to Take Board Exam Uithin 2 Years?

Q5A	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Blank	12	1.8	12	1.8
Does Not Apply	440	67.8	452	69.6
Missing	7	1.1	459	70.7
Yes	111	17.1	570	87.8
No	79	12.2	649	100.0

6. Are you a member of the Public Health Service Commissioned Corps or a Civil Service employee of the MS?

Organization Affiliated with

Q6	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	14	2.2	14	2.2
PHS Comsd Corps	346	53.3	360	55.5
Civil Serv Empl	289	44.5	649	100.0

7. What do you consider your primary assignment within the Indii Health Service?

Primary Assignment within IHS

Q7	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	5	0.8	5	0.8
Ptnt Care Prvd	526	81.0	531	81.8
Clinical Admin	91	14.0	622	95.8
General Admin	17	2.6	639	98.5
Other	10	1.5	649	100.0

8. Are you the clinical director of your IHS facility?

Are You Clinic1 Dir of your IHS Facilty?

Q8	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	8	1.2	8	1.2
Yes	86	13.3	94	14.5
No	555	85.5	649	100.0

9. At your facility, does the clinical director significantly influence management decisions?

Does Clinical Dir Influence Mgt Decisns?

a9	Frequency	Percent	Cumulative Frequency	Cunutative Percent
Missing	41	6.3	41	6.3
Yes	455	70.1	496	76.4
No	153	23.6	649	100.0

10. During your most recent complete week in practice, how many hours did you spend:

a. Seeing patients in an outpatient clinic

Hours/wk seeing patnts in outpat clinic

Q10A	Frequency	Percent	Cumulative Frequency	Cunutetive Percent
No Response	65	10.0	65	10.0
1-10	90	13.9	155	23.9
11-20	97	14.9	252	38.8
21-30	114	17.6	366	56.4
31-40	216	33.3	582	89.7
41-50	50	7.7	632	97.4
51-60	12	1.8	644	99.2
>60	5	0.8	649	100.0

b. Seeing hospitalized patients

Hours/wk seeing hospital patients

Q10B	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No Response	221	34.1	221	34.1
1-10	286	44.1	507	78.1
11-20	75	11.6	582	89.7
21-30	27	4.2	609	93.8
31-40	18	2.8	627	96.6
41-50	9	1.4	636	98.0
51-60	8	1.2	644	99.2
>60	5	0.8	649	100.0

c. In other patient care activities

Hours/wk in other patnt care activities

Q10C	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No Response	263	40.5	263	40.5
1-10	269	41.4	532	82.0
11-20	66	10.2	598	92.1
21-30	28	4.3	626	96.5
31-40	14	2.2	640	98.6
41-50	6	0.9	646	99.5
>60	3	0.5	649	100.0

d. In non-patient care activities

Hours/wk in non-patient care activities

Q10D	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No Response	157	24.2	157	24.2
1-10	363	55.9	520	80.1
11-20	58	8.9	578	89.1
21-30	22	3.4	600	92.4
31-40	23	3.5	623	96.0
41-50	15	2.3	638	98.3
51-60	8	1.2	646	99.5
>60	3	0.5	649	100.0

e. Total hours **all** activities (Should equal the sum of **10a. - 10d.)**

Hours/wk in all activities

Q10E	Frequency	Percent	Cunulative Frequency	Cunulative Percent
Missing	16	2.5	16	2.5
1-10	7	1.1	23	3.5
11-20	7	1.1	30	4.6
21-30	9	1.4	39	6.0
31-40	126	19.4	165	25.4
41-50	220	33.9	385	59.3
51-60	158	24.3	543	83.7
>60	106	16.3	649	100.0

11. Knowing what you know now, would you choose medicine as a profession again?

Would Choose Medicine as Professn Again?

Q11	Frequency	Percent	Cunulative Frequency	Cunulative Percent
Hissing	16	2.5	16	2.5
Yes	570	87.8	586	90.3
No	63	9.7	649	100.0

12. **Knowing** what you know now, would you choose to practice **medicine** in the MS again?

Would You choose IHS Again?

912	Frequency	Percent	Cunulstive Frequency	Cumulative Percent
Missing	21	3.2	21	3.2
Yes	515	79.4	536	82.6
No	113	17.4	649	100.0

13. Do you currently **plan** to leave the **IHS** within the next 5 years?

Plan to Leave IHS uithin next 5 years?

a13	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	38	5.9	38	5.9
Yes	327	50.4	365	56.2
No	284	43.8	649	100.0

13a. When do you plan to leave the MS?

Uhen Plan to Leave IHS?

Q13A	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Blank	38	5.9	38	5.9
Does Not Apply	284	43.8	322	49.6
Missing	3	0.5	325	50.1
Within 1 Year	102	15.7	427	65.8
Yithin 2 Years	95	14.6	522	80.6
Uithin 3 Years	59	9.1	581	89.5
More thn 3 Years	68	10.5	649	100.0

14a. Which of the following best describes your reaction to the distribution of hours you dedicate to patient care and non-patient care activities in the **IHS?**

14b. How important is the distribution of patient care hours in your decision to stay with or leave the MS?

Q14A(How Satisfied uith ptnt/non-ptnt mix?) **Q14B(How Important is ptnt/non-ptnt mix?)**

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Im-portant	Total
Missing	7 1.08	0 0.00	0 0.00	3 0.46	3 0.46	2 0.31	15 2.31
(1)Dissatisfied	0 0.00	0 0.00	0 0.00	1 0.15	6 0.92	14 2.16	21 3.24
2	0 0.00	4 0.62	6 0.92	9 1.39	42 6.47	9 1.39	70 io.79
3	1 0.15	7 1.08	9 1.39	28 4.31	38 5.86	19 2.93	102 15.72
4	17 1.0;	17 2.62	46 7.11	45 6.93	107 16.49	54 8.32	277 -2.68
(5)Satisfied	0.1:	30 4.62	8 1.23	14 2.16	42 6.47	69 10.63	164 25.27
Total	16 2.47	58 8.94	70 10.79	100 15.41	238 36.67	167 25.73	649 100.00

15a. How would you rate the administrative support in your IHS facility?

15b. How important is the administrative support in your decision to stay with or leave the MS?

Q15A(How Rate Administrative Support?) Q15B(How Important is Administrative Support?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	7 1.08	0 0.00	1 0.15	0 0.00	4 0.62	2 0.31	14 2.16
(1)Poor	0 0.00	0.6:	2 0.31	11 1.69	26 4.01	58 8.94	101 15.56
2	3 0.46	2 0.31	7 1.08	18 2.77	60 9.24	43 6.63	133 20.49
3	0.1:	0.7:	8 1.23	43 6.63	55 8.47	38 5.86	150 23.11
4	0.3:	12 1.85	13 2.00	15 2.31	74 11.40	52 8.01	168 25.89
(5)Excellent	1 0.15	14 2.16	3 0.46	5 0.77	17 2.62	43 6.63	83 12.79
Total	14 2.16	37 5.70	34 5.24	92 14.18	236 36.36	236 36.36	649 100.00

16a. Do you consider the number of medical support staff as adequate or inadequate?

16b. How important is the number of medical support staff in your decision to stay with or leave the MS?

Q16A(Consider No. Med Support Staff Adequate?)

Q16A	Q16B(How Important is No. Med Support Staff?) Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	8 1.23	0 0.00	0 0.00	11 1.69	18 2.77	5 0.77	42 6.47
(1)Inadequate	3 0.46	17 2.62	25 3.85	65 10.02	160 24.65	119 18.34	389 59.94
2	0 0.00	0 0.00	0 0.00	9 1.39	7 1.08	3 0.46	20 3.08
3	1 0.15	5 0.77	3 0.46	1 0.15	12 1.85		
4	0 0.00	0 0.00	1 0.15	3 0.46	4 0.62	3 0.46	11 1.69
(5)Adequate	2 0.3	19 2.93	12 1.85	31 4.78	61 9.40	50 7.70	175 26.96
Total	14 2.16	38 5.86	39 6.01	124 19.11	253 38.98	181 27.89	649 100.00

17a. How would you rate the **quality** of medical support stat? (e.g., nurses, technicians) in your MS facility?

17b. How important is the **quality** of medical support staff in your decision to stay with or leave the MS?

Q17A(How Rate Quality Of Med Support Staff?)
Q17B(How Importnt is Quality Med Supprt Staff?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	1.3;	0 / 0.00	1 / 0.15	2 / 0.31	3 / 0.46	5 / 0.77	to 3.08
(1)Poor	0 / 0.00	0.1:	0 / 0.00	0.3:	5 / 0.77	13 / 2.00	21 / 3.24
2	0 / 0.00	0 / 0.00	6 / 0.92	7 / 1.08	23 / 3.54	24 / 3.70	60 / 9.24
3	0.3:	6 / 0.92	11 / 1.69	47 / 7.24	74 / 11.40	49 / 7.55	189 / 29.12
4	3 / 0.46	13 / 2.00	18 / 2.77	34 / 5.24	130 / 20.03	69 / 10.63	267 / 41.14
(5)Excellent	0 / 0.00	12 / 1.85	1 / 0.15	5 / 0.77	22 / 3.39	52 / 8.01	92 / 14.18
Total	14 / 2.16	32 / 4.93	37 / 5.70	97 / 14.95	257 / 39.60	212 / 32.67	649 / 100.00

18a. How would you rate the adequacy of your MS physical **facilities (plant and** equipment)?

18b. How important are the physical facilities in your decision to stay with or leave the **IHS?**

Q18A(How Rate Adequacy of IHS Phys Facilties?)

Q18B(How Important are IHS Phys Facilities?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	7 1.08	0 0.00	1 0.15	4 0.62	5 0.77	0 0.00	17 2.62
(1)Poor	0 0.00	2 0.31	11 1.69	221 3.39	38 5.86	23 3.54	96 14.79
2	0 0.00	10 1.54	18 2.77	38 5.86	46 7.09	18 2.77	130 20.03
3	0.3:	11 1.69	29 4.47	76 11.71	55 8.47	14 2.16	187 28.81
4	0.3:	18 2.77	23 3.54	39 6.01	67 10.32	13 2.00	162 24.96
(5)Excellent	0 0.00	7 1.08	6 0.92	9 1.39	15 2.31	20 3.08	57 8.78
Total	11 1.69	48 7.40	88 13.56	188 28.97	226 34.82	88 13.56	649 100.00

19a. How would you rate the availability of referral services in the IHS?

19b. How important is the availability of referral services in your decision to stay or leave the MS?

Q19A(How Rate Availblty of Referral Services?)
Q19B(How Importnt Availbity Referrl Services?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Im-portant	Total
Missing	8 1.23	0 0.00	0 0.00	0 0.00	5 0.77	1 0.15	14 2.16
(1)Poor	0 0.00	1 0.15	2 0.3:	6 0.92	11 1.69	9 1.39	29 4.47
2	0 0.00	3 0.46	7 1.08	30 4.62	42 6.47	13 2.00	95 14.64
3	2 0.31	16 2.47	14 2.16	72 11.09	54 8.32	27 4.16	185 28.51
4	1 0.1:	18 2.77	31 4.78	49 7.55	108 16.64	32 4.93	239 36.83
(5)Excellent	1 0.1:	11 1.69	9 1.39	8 1.23	20 3.08	38 5.86	87 13.41
Total	12 1.85	49 7.55	63 9.71	165 25.42	240 36.98	120 18.49	649 100.00

20a. **How** would you rate the **quality** of care provided at your MS facility'?

20b. How important are quality of care issues in your decision to stay with or **leave the MS?**

Q20A(How Rate auatity of Care Provided?) **Q20B(How Importnt are Quality of Care Issues?)**

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Im-portant	Total
Missing	10 1.54	0 0.00	0 0.00	0 0.00	3 0.46	5 0.77	18 2.77
(1)Poor	0 0.00	1 0.15	0 0.00	0 0.00	0 0.00	2 0.31	3 0.46
2	0 0.00	0 0.00	0 0.00	2 0.31	0 0.00	12 1.85	14 2.16
3	0 0.00	0.3:	4 0.62	16 2.47	39 6.01	31 4.78	92 14.18
4	5 0.77	12 1.85	2.267	37 5.70	134 20.65	130 20.03	334 51.46
(5)Excellent	1 0.15	14 2.16	3 0.46	7 1.08	33 5.08	130 20.03	188 28.97
Total	16 2.47	29 4.47	23 3.54	62 9.55	209 32.20	310 47.77	649 100.00

21a. **How** would you rate Continuing Medical Education (CME) opportunities in the IHS?

21b. How important are CME opportunities in your decision to stay With or leave the MS?

Q21A(How Rate CME Opportunities in the IHS?) Q21B(How Important are CME Opportunities?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	10 1.54	0 0.00	0 0.00	1 0.15	1 0.15	2 0.31	14 2.16
(1)Poor	0 0.00	8 1.23	4 0.62	14 2.16	16 2.47	18 2.77	60 9.24
2	3 0.46	3 0.46	13 2.00	28 4.31	32 4.93	15 2.31	94 14.48
3	0.1:	9 1.39	29 4.47	79 12.17	58 8.94	16 2.47	192 29.58
4	0 0.00	17 2.62	26 4.01	41 6.32	90 13.87	31 4.78	205 31.59
(5)Excellent	0 0.00	2.1;	0.4:	71 1.08	34 5.24	24 3.70	84 12.94
Total	14 2.16	53 8.17	75 11.56	170 26.19	231 35.59	106 16.33	649 100.00

22a. How would you rate MS opportunities for career development?

22b. How important are career development opportunities in your decision to stay with or leave the MS?

Q22A(How Rate IHS Career Devlp Opportunities?)
Q22B(How Importnt are Career Dev Opportnties?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	13 2.00	3 0.46	0.3:	0 0.00	1 0.15	3 0.46	22 3.39
(1)Poor	0 0.00	7 1.08	4 0.62	12 1.85	23 3.54	40 6.16	86 13.25
2	1 0.15	8 1.23	22 3.39	22 3.39	64 9.86	22 3.39	139 21.42
3	3 0.46	22 3.39	22 3.39	91 14.02	62 9.55	26 4.01	226 34.82
4	0 0.00	10 1.54	12 1.85	26 4.01	54 8.63	32 4.93	136 20.96
(5)Excellent	0 0.00	1 1.29	1 0.15	5 0.77	15 2.31	11 1.69	40 6.16
Total	17 2.62	58 8.94	63 9.71	156 24.04	221 34.05	134 20.65	649 100.00

23a. How would you rate the nature of your relations with the Native American Community?

23b. How important are your relations with the Native American Community in your decision to stay with or leave the IHS?

Q23A(How Rate Relatns w/ Native Amer Commnty?)
Q23B(How Importnt Relatns w/ Ntve Amer Comty?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	8 1.23	1 0.15	0 0.00	0 0.00	5 0.77	1 0.15	15 2.31
(1)Poor	0 0.00	0 0.00	0 0.00	1 0.15	2 0.31	5 0.77	8 1.23
2	0 0.00	0.1:	3 0.46	6 0.92	7 1.08	6 0.92	23 3.54
3	0.1:	9 1.39	9 1.39	46 7.09	46 7.09	16 2.47	127 19.57
4	0.3:	25 3.85	20 3.08	41 6.32	133 20.49	67 10.32	288 44.38
(5)Excellent	0.3:	13 2.00	4 0.62	10 1.54	31 4.78	128 19.72	188 28.97
Total	13 2.00	49 7.55	36 5.55	104 16.02	224 34.51	223 34.36	649 100.00

24a. How would you rate your current annual compensation (**salary** and bonus) in the MS?

24b How important is your current **annual compensation** in y&r decision to stay with or leave the **IHS?**

Q24A(How Rate Current IHS Annual Compensatn?)
Q24B(How Importnt is IHS Annual Compensatn?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	5 0.77	0 0.00	0 0.00	1 0.15	0 0.00	0 0.00	6 0.92
(1)Dissatisfied	1 0.15	3 0.46	1 0.15	6 0.92	17 2.62	70 10.79	98 15.10
2	0.1:	3 0.46	11 1.69	33 5.08	5' 7.86	28 4.31	127 19.57
3	0 0.00	1.23	1.34	9.69	6.76	3.24	145 22.34
4	0.3	'5 2.31	21 3.24	48 7.40	88 13.56	20 3.08	195 30.05
(5)Satisfied	1 0.15	21 3.24	12 1.85	9 1.39	20 3.08	15 2.31	78 12.02
Total	11 1.69	50 7.70	55 8.47	156 24.01	220 33.90	157 24.19	649 100.00

25a. How would you rate your expected future compensation in the MS?

25b. How important is your expected future **compensation** in your decision to stay with or leave the MS?

Q25A(How Rate Expected Future IHS Compensatn?)

Q25B(How Impt Expected Future IHS Compensatn?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	8 1.23	2 0.31	0 0.00	1 0.15	4 0.62	1 0.15	16 2.47
(1)Dissatisfied	1 0.15	2 0.31	1 0.15	5 0.77	16 2.47	60 9.24	85 13.10
2	1 0.15	2 0.31	9 1.39	24 3.70	59 9.09	34 5.24	129 19.88
3	1 0.15	5 0.77	13 2.00	73 11.25	71 10.94	37 5.70	200 30.82
4	1 0.15	14 2.16	20 3.08	32 4.93	79 12.17	22 3.39	168 25.89
(5)Satisfied	0 0.00	17 2.62	6 0.92	5 0.77	10 1.54	13 2.00	51 7.86
Total	12 1.85	42 6.47	49 7.55	140 21.57	239 36.83	167 25.73	649 100.00

26. Have you ever participated in the MS loan repayment program?

Ever Participated in IHS Loan Repay Prg?

Q26	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	13	2.0	13	2.0
Yes	115	17.7	128	19.7
No	521	80.3	649	100.0

26a. What is that maximum amount that could have been repaid?

Max Amount that Could Have Been Repaid

Q26A	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Blank	13	2.0	13	2.0
Does Not Apply	521	80.3	534	82.3
Missing	16	2.5	550	84.7
~10,000	10	1.5	560	86.3
10,000 - 19,999	16	2.5	576	88.8
20,000 - 29,999	19	2.9	595	91.7
30,000 - 39,999	10	1.5	605	93.2
40,000 - 49,999	12	1.8	617	95.1
50,000 - 59,999	9	1.4	626	96.5
60,000 - 69,999	3	0.5	629	96.9
70,000 - 79,999	10	1.5	639	98.5
80,000 - 89,999	3	0.5	642	98.9
90,000 - 99,999	2	0.3	644	99.2
>=100,000	5	0.8	649	100.0

27a. How would you rate your reaction to the loan repayment program?

27b. How important is your evaluation of the loan repayment program in your decision to stay with or leave the **IHS?**

Q27A(How Rate Reaction to Loan Repay Program?) **Q27B(How Impt Reaction to Loan Repay Program?)**

Frequency / Percent	(Blank	Does Not Apply	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Blank	13 2.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	13 2.00
Does Not Apply	0 0.00	521 80.28	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	521 80.28
Missing	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1 0.15	0 0.00		1 0.15
(1)Dissatisfied	0 0.00	0 0.00	0 0.00	2 0.31	3 0.46	2 0.31	6 0.92	7 1.08	20 3.08
2	0 0.00	0 0.00	0 0.00	3 0.46	6 0.92	2 0.31	5 0.77	2 0.31	18 2.77
3	0 0.00	0 0.00	1 0.15	5 0.77	3 0.46	4 0.62	1 0.15	0 0.00	14 2.16
4	0 0.00	0 0.00	0 0.00	7 1.08	5 0.77	7 1.08	15 2.31	6 0.92	40 6.16
(5)Satisfied	0 0.00	0 0.00	0 0.00	5 0.77	2 0.31	0 0.00	6 0.92	9 1.39	22 3.39
Total	13 2.00	521 80.28	1 0.15	22 3.39	19 2.93	15 2.31	34 5.24	24 3.70	649 100.00

28a. **How** would you rate MS housing benefits?

28b. How important are housing benefits in your decision to stay with or **leave** the IHS?

Q28A(How Rate IHS Housing Benefits?) **Q28B(How Important are IHS Housing Benefits?)**

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	65 10.02	12 1.85	4 0.62	2 0.31	1 0.15	0 0.00	84 12.94
(1)Poor	0 0.00	24 3.70	14 2.16	22 3.39	18 2.77	15 2.31	93 14.33
2	4 0.62	11	22 3.39	18 2.77	27	7 1.08	89
	0.3:	40 6.16	26 4.01	9 14.02	41 6.32	17 2.62	217 33.44
4	0.62	12 1.85	22 3.39	29 4.47	38 5.86	15 2.31	120 18.49
(5)Excellent	0.00	1.54	4 0.62	8 1.23	7 1.08	17 2.62	46 7.09
Total	75 11.56	109 16.80	92 14.18	170 26.19	132 20.34	71 10.94	649 100.00

29a. How would you rate your local living conditions?

29b. How important are your living conditions in your decision to stay with or leave the MS?

Q29A(How Rate Local Living conditions?)	Q29B(How Important are Local Living Conditns?)						
Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	18 2.77	1 0.15	0 0.00	0 0.00	0 0.00	1 0.15	20 3.08
(1)Poor	0 0.00	3 0.46	1 0.15	3 0.46	7 1.08	10 1.54	24 3.70
2	1 0.15	1 0.15	5 0.77	1 0.15	18 2.77	12 1.85	38 5.86
3	3 0.46	13 2.00	8 1.23	38 5.86	35 5.39	25 3.85	122 18.80
4	7 1.08	22 3.39		24 3.70	129 19.88	63 9.71	260 40.06
(5)Excellent	0	33 5.08	4 0.62	8 1.23	39 6.01	100 15.41	185 28.51
Total	30 4.62	66 10.17	40 6.16	74 11.40	228 35.13	211 32.51	649 100.00

30. What is your current marital status?

Current Marital Status

a30	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	18	2.8	18	2.8
Married	491	75.7	509	78.4
Cohabitating	22	3.4	531	81.8
Separated	8	1.2	539	83.1
Divorced	37	5.7	576	88.8
Widowed	3	0.5	579	89.2
Never Married	70	10.8	649	100.0

31a. How **would** you rate **employment opportunities for** your **spouse/partner** in the area **where** you **now** live?

31b. How important are employment opportunities for your **spouse/partner** in **your decision to stay with or leave the IHS?**

Q31A(How Rate Emplymnt Oppor for Spouse/Part?) **Q31B(How Impt Emplymnt Oppor for Spouse/Part?)**

Frequency / Percent	Blank	Does Not Apply	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Blank	18 2.77	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	18 2.77
Does Not Apply	0 0.00	118 18.18	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	118 18.18
Missing	0 0.00	0 0.0:	8 1.23	7 1.08	0 0.00	0 0.00	0 0.00	0 0.00	15 2.31
(1)Poor	0 0.00	0 0.0:	2 0.31	9 1.39	6 0.92	16 2.47	'6 2.47	23 3.54	72 11.09
2	0 0.00	0 0.00	1 0.15	6 0.92	10 1.54	'8 2.77	12 1.85	14 2.16	61 9.40
3	0 0.00	0 0.00	3 0.46	16 2.47	11 1.69	23 3.54	26 4.01	25 3.85	104 16.02
4	0 0.00	0 0.00	3 0.46	'6 2.47	17 2.62	'3 2.00	31 4.78	35 5.39	115 17.72
(5)Excellent	0 0.00	0 0.00	2 0.31	19 2.93	4 0.62	9 1.39	24 3.70	88 13.56	146 22.50
Total	18 2.77	118 18.18	19 2.93	73 11.25	48 7.40	79 12.17	109 16.80	185 28.51	649 100.00

32. How many children do you have in the following age groups who reside with you?

TABLE OF AGE_GRP BY NO-KIDS

AGE_GRP(age group) NO_KIDS(no. of children residing with respondent)

Frequency / Row Pct	0	1	2	3	4	5	Total
0-2 years	500	127	20	2	0	0	649
	77.04	19.57	3.08	0.31	0.00	0.00	
3-5 years	521	107	21	0	0	0	649
	80.28	16.49	3.24	0.00	0.00	0.00	
6-13 years	473	89	74	10	3	0	649
	72.88	13.71	11.40	1.54	0.46	0.00	
14-18 years	572	60	17	0	0	0	649
	88.14	9.24	2.62	0.00	0.00	0.00	
19+ years	598	24	17	5	3	2	649
	92.14	3.70	2.62	0.77	0.46	0.31	
Total	2664	407	149	17	6	2	3245

33. Do you have other dependents who live with you?

Have Other Dependents Living with You?

Q33	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	6	0.9	6	0.9
Yes	52	8.0	58	8.9
No	591	91.1	649	100.0

33a. In addition to children counted in question 32, how many dependents live with you?

No. Non-Child Dependents Living uith You

Q33A	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Blank	6	0.9	6	0.9
Does Not Apply	591	91.1	597	92.0
Missing	7	1.1	604	93.1
1	37	5.7	641	98.8
2	5	0.8	646	99.5
3	1	0.2	647	99.7
4	2	0.3	649	100.0

34a. How would you rate the impact of your service **in the IHS** on your **family** members?

34b. How important is the impact of your service in the MS on your family members in your decision to stay with or leave the MS?

Q34A(How Rate Impact of IHS Servcc on Family?)
Q34B(How Impt Impact of IHS Servcc on Family?)

Frequency / Percent	Missing	(1)Not Importnt	2	3	4	(5)Important	Total
Missing	35 5.39	0.3:	0 0.00	1 0.15	1 0.15	0 0.00	39 6.01
(1)Negative	1 0.15	3 0.46	0 0.00	0.1:	5 0.77	26 4.01	36 5.55
2	0 0.00	0.1:	2 0.31	8 1.23	22 3.39	41 6.32	74 11.40
3	0.3:	14 2.16	9 1.39	77 11.86	42 6.47	46 7.09	190 29.28
4	3 0.46	17 2.62	11 1.69	17 2.62	95 14.64	86 13.25	229 35.29
(5)Positive	0 0.00	4 0.62	1 0.15	3 0.46	12 1.85	61 9.40	81 12.48
Total	41 6.32	41 6.32	23 3.54	107 16.49	177 27.27	260 40.06	649 100.00

35. What is your sex?

Respondent Gender

Q35	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	4	0.6	4	0.6
Male	471	72.6	475	73.2
Female	174	26.8	649	100.0

36. Which of these groups best describes your ethnic origin?

Respondent Ethnic Origin

Q36	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	9	1.4	9	1.4
White/Not Hisp	493	76.0	502	77.3
White/Hisp Orig	29	4.5	531	81.8
Black/Not Hisp	26	4.0	557	85.8
Black/Hisp Orig	1	0.2	558	86.0
Asian/As Amr/Pcf	31	4.8	589	90.8
Amer Ind/Alaska	43	6.6	632	97.4
Other	17	2.6	649	100.0

37. In what year were you born?

age of respondent

AGE	Frequency	Percent	Cwlative Frequency	Cunulative Percent
Missing	10	1.5	10	1.5
<=30	54	8.3	64	9.9
31-40	323	49.8	387	59.6
41-50	159	24.5	546	84.1
>50	103	15.9	649	100.0

38. What medical school did you attend (if more than one, please list the school of graduation)?

med school type

SCHL_TYP	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Missing	13	2.0	13	2.0
Public	341	52.5	354	54.5
Private	204	31.4	558	86.0
Canadian	2	0.3	560	86.3
Other Foreign	41	6.3	601	92.6
Osteopathic	48	7.4	649	100.0

39. In what year did you graduate from medical school?

Year Graduated from Medical School

a39	Frequency	Percent	Cunulative Frequency	Cunulative Percent
Missing	11	1.7	11	1.7
<=1950	8	1.2	19	2.9
1951 - 1960	46	7.1	65	10.0
1961 - 1970	73	11.2	138	21.3
1971 - 1980	146	22.5	284	43.8
1981 - 1985	209	32.2	493	76.0
1986 - 1990	152	23.4	645	99.4
1991	4	0.6	649	100.0

40. How would you describe the community you lived in when you were 16 years old? Would you say it was urban, suburban, or rural (a small town or farm)?

Community Type Lived in Uhen 16 Yrs Old

Q40	Frequency	Percent	Cunulative Frequency	Cwlative Percent
Hissing	14	2.2	14	2.2
Urban	180	27.7	194	29.9
Suburban	231	35.6	425	65.5
Rural	224	34.5	649	100.0